

THE JOURNAL
OF THE
ROYAL UNITED SERVICE INSTITUTION.

VOL. XLI. JULY, 1897. No. 233.

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THE EDUCATION AND TRAINING OF NAVAL
AND MILITARY CADETS.

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Wednesday, March 31st, 1897.

Admiral of the Fleet Sir J. E. COMMERELL, G.C.B., V.C.,
in the Chair.

PART I.

LAST year the Government brought in what is known as the Education Bill, which was ultimately withdrawn; but the meetings, speeches, and public correspondence on the subject, which have continued more or less ever since, show that the subject is one in which the nation takes an intense interest. From a mere question of Voluntary and Board Schools, the matter has gradually widened till it includes not only State-supported schemes of primary and secondary education, but also that of the middle and upper classes.

Amongst other questions brought forward was that of technical training in those industries which have hitherto added so much to the national wealth. This is now stated to be behind the age, and in consequence of this neglect manufactures in which we were formerly pre-eminent are gradually passing into the hands of the foreigner. Unfortunately, the letters and statements written for the public information show only too clearly that unless decided reforms are made, not only in technical instruction, but also in that mental training which can only be acquired by a *really* liberal education, no small portion of our trade and wealth will, in due time, be taken from us. The easy time which manufacturers and merchants had before the present days of keen competition with the foreigner have now passed away, and the country has at last been thoroughly roused to the necessity for educational reform.

Opposition naturally may be expected from those who have hitherto found the ancient grooves of scholastic work both easy and profitable. The commercial world, however, on which the prosperity of the nation now really rests, will see that the education it requires is supplied; but it

is different with certain other portions of the community, such, for instance, as the Navy and Army, who are, by traditions of the Services and system of administration, prohibited from bringing forward any possible reform except through the ordinary official channels. Piteous letters do appear occasionally in the newspapers from parents who for years have paid very heavy school bills for boys who are found to be hopelessly ignorant when tested for Army Examinations, even when through the Militia; but the only remedy such complainants seem to think of is that of taking their boys away from school and sending them to crammers, to find but too often that not even the most able coach can make up for the years wasted at school. The final result in far too many cases is that the unfortunate boy, from his defective education, being unable to get into the public service, even in a clerical department, and being without any acquirements suitable for business, is sent to the Colonies to begin life as a cowboy on a west country ranch in America, or take his chance as a private in some South African police force, or perhaps to end his days on a solitary back block in Australia on 15s. a week and his food. Only those who have lived and travelled in the Colonies can form any conception of the number of fine young fellows whose lives have been destroyed by the neglect of those who had their education and bringing up in their hands. When taxed with neglect of duty to their charges, some have calmly said, "Well, the boy had every opportunity given him of receiving instruction; if he did not choose to learn, that was his fault, not ours." That the public correspondence which has lately appeared will have some effect is very probable, but the subject of Army entrance examination is one of far too much importance to be left to such a desultory way of supplying correct information. The following paper has therefore been written for the benefit of those who are interested in the matter, and shows how officers are obtained for the Navy and Army, and what are the apparent defects in the existing systems:—

Royal commissions, committees, and writers innumerable in years gone by have given their ideas as to the requirements for the young officers of both Services, and to now enter into the details of the many reports on the subject would be beside the question; it will be sufficient if the result of their labours, viz., the systems now in force as regards the education and training of naval and military cadets, be shortly stated.

Commencing with the senior Service, which has made us supreme at sea, and enabled us to become the most mighty Empire the world has yet known, it would be presumptuous for a soldier to give an opinion on naval matters; but it is hoped that a mere statement of facts and the views of our most experienced naval officers will not be considered out of place, more especially when mentioned by one who has always believed that the old system of professional training in the Navy produced the most perfect specimen of everything that was excellent. Indirectly, the writer may be said to be personally connected with the Navy, having formerly belonged to a regiment which was honoured in ancient days by Nelson calling them his old Agamemnons, and which afterwards formed some of the boarders from the "Captain". side by side with our great naval

hero, when he captured the "San Nicolas" and that great three-decker the "San Joseph" at St. Vincent, a name the regiment now so proudly bears on its colours.

Candidates for cadetships in the Navy apply to the Admiralty. The First Lord makes his selection from the applicants, nominating three boys for each vacancy. Certain naval officers are also allowed the privilege of having their nominees included in the list of those presenting themselves for examination. The system of entry is, therefore, one of somewhat limited competition. The age, which has been $12\frac{1}{2}$ to $13\frac{1}{2}$, giving an average of 13, was not long ago altered to $13\frac{1}{2}$ to $14\frac{1}{2}$, at which it now stands; but in another year it will be raised to $15\frac{1}{2}$, so that on joining the "Britannia" the age may for the future be taken at an average of 15 years. On referring to the last half-yearly examination papers, it appears that in June, 1895, only 113 candidates succeeded in passing even the very low standard of qualification; of these 71 obtained cadetships, although some really knew practically nothing of the subjects in which they were credited with marks, one of the successful boys scoring 4 out of 300 in Latin, and other successful ones no more than 45 out of 150 in geography, and 53 out of 150 in English History; a trifle over half marks in the aggregate is found to be sufficient to secure success. It will hardly be believed that the Civil Service Commissioners consider a maximum of 60 marks out of 150 as sufficient to qualify in the very elementary subjects of handwriting, dictation, and composition. In the long tail of candidates not qualified, some by the marks, which are fully recorded, show they could barely read and write.

In June, 1896, 110 qualified for the 61 vacancies. Amongst the successful ones who obtained cadetships, one made but 16 out of 300 in Latin; another, 50 out of 150 in English History; and a third, 64 out of 150 in geography.

If the authorities who are responsible for the educational standard of our future naval officers consider such a test as that above mentioned sufficient in the present day, they must have a very low estimate of what is required for the Navy. To apply the word "competition" at all to such a standard for boys of fourteen is a misnomer. When it is remembered that candidates may only try twice, it is simply startling to find that schoolmasters who unquestionably must test their pupils before sending them up, nevertheless present such boys as those whose marks are recorded in the tail, and expect them to be successful. This shows how little the schoolmasters think of the examination. Judging from the papers and the official records of the results, the whole system of entry can surely be hardly considered satisfactory by anyone concerned, and the Civil Service Commissioners, by the papers they submit, must take their share of blame in the matter. From the style of questions in Scripture, and particularly in English history, for boys of fourteen, cram of the most pernicious description is essential. Two questions from the June examination of 1896 are given as specimens:—"Explain the cause and origin of "the War of the Spanish Succession, and describe the first two great "battles, with the results and the consequences of each. What were the

"provisions of the two Partition Treaties?" "Describe Napoleon's treatment of Spain and Portugal and Wellington's operations in the Peninsula." The Scripture questions might do for a young man who is studying for the Church, but for a naval cadet they seem singularly out of place. Here is the last in the June examination paper of 1896:—"What does St. Paul tell us of his sufferings for Christ, and why did he appeal to Cæsar. State what lessons may be learned from the example of St. Paul?"

With such a passing in standard as that now in force, it is no wonder that a large proportion of the cadets are quite unable to assimilate the amount of mental food presented to them during the two years they are on board the "Britannia"; and although they may cram themselves to pass out successfully, which they nearly all do, it would be astonishing if captains did not complain that on joining a sea-going ship the boys soon seem to forget nearly everything they have been taught. The subjects of instruction in the "Britannia" are algebra, six books of euclid, plane and spherical trigonometry, navigation, charts and instruments, French, drawing, seamanship, physics, and steam. When it is remembered that seamanship means a very considerable amount of time taken up in practical instruction, and that only two years are allowed for the whole of the above-named very extensive course, the reason for retaining naval instructors on board sea-going ships, if only to try and prevent midshipmen forgetting what they have been taught, is at once apparent. In addition to elementary work in mathematics, the duties of the naval instructor are to teach mechanics, hydrostatics, more advanced navigation, and steam, the executive and engineer officers being the instructors in other subjects. After three years and a half afloat, part of that time being passed in the training squadron, the midshipman at nineteen goes up for his lieutenant's examination in seamanship, and if successful receives a commission as acting sub-lieutenant and then joins the Naval College at Greenwich to pass in navigation. Afterwards he goes to Portsmouth for short courses in torpedo work, gunnery, and pilotage. These successfully got over, the sub-lieutenant at about twenty-one years of age is qualified for lieutenant's rank, and need pass no further compulsory examinations during the time he is in the Navy, although he may, if so desirous, go through advanced courses in the subjects in which he has already qualified.

On board the "Britannia," the defective education of a considerable number of the cadets on entry, and the extensive amount of work they have to get over there, are stated to be the great drawbacks. On board ship, the difficulties under which the midshipman obtains his further scholastic and professional instruction are mentioned by several well-known naval officers. They are tersely summed up by Captain Arthur Moore, C.M.G., commanding the "Britannia," and were brought forward at the discussion last year on the Naval Prize Essay at the Royal United Service Institution. Captain Moore states as follows:—

"Captain Eardley-Wilmot would increase the age of entry, and is in favour of open competition. Now I know there are many officers, and no doubt many here present, who would view with great distrust any

“departure from the old-established custom of entering executive officers
“young, but I would like to point out the altered condition in the life of
“the midshipman in the sea-going ship at the present time to what it
“was thirty or forty years ago. Cadets then went to sea at fourteen,
“became midshipmen of the watch, first on the quarter-deck, then on
“the fore-castle, when the officer of the watch trusted to them to look
“after the headgear, the fore-top gallant mast, and so on. They were
“then allowed to take charge of the watch at times, and at the end of
“five and a half years’ sea service midshipmen came up for their examina-
“tion for lieutenant with a real sound knowledge of seamanship, and had
“also learned thorough navigation and some mathematics. What are
“the conditions now? Cadets go to sea at sixteen on the average, and
“serve for three-and-a-half years as midshipmen; but what are they
“doing? Their forenoons are generally devoted to school; the study of
“elementary pure mathematics chiefly, and some navigation; in the
“afternoon they have instruction in gunnery, torpedo, seamanship and
“other subjects. As midshipmen of the watch, after school hours, what
“have they to do? The officer of the watch is on the bridge with one
“helmsman at the steam wheel, and all the midshipman has to do is to
“go occasionally round the ship. The only hours he has an opportunity
“of learning seamanship are during the forenoon and afternoon when
“there are tactical evolutions and drills. In one ship he is sent on deck
“when there are evolutions, but in another ship you find that he is never
“allowed to be away from school. If these are the conditions, if this
“scholastic work is to go on, it is impossible for a midshipman to receive
“training as a seaman and as an officer, which has been the custom in
“the past. I think there can be no doubt the naval officer of the present
“day does require a higher mathematical knowledge than formerly, but
“what many officers object to is the constant teaching of elementary pure
“mathematics at sea, to the detriment of professional training. It surely
“cannot be right, and if you look at the results of examinations you will
“find there is not much progress made. I would not suggest any very
“drastic change, and cannot go with Commander Honner in his sug-
“gestions for so late an entry; but there is a great deal in Captain
“Wilmot’s paper I do agree with. I think if we were to send midshipmen
“to sea slightly older, with a solid groundwork in mathematics, they
“would become effective in a shorter period. I think it is far better to
“have a shorter time as midshipmen, and to take up responsible duties
“in the ship earlier than they do now. As far as competition goes, it is
“rather a delicate subject. I have no doubt there is a great deal to be
“said for and against both systems. But without committing myself to
“an opinion on either, I think it perhaps is not well to unduly limit the
“area of selection. I am very sorry there is any diversity of opinion on
“the necessity for utilising a training squadron. I know what I owed to
“the training under my first captain in a ship that was always under
“canvas, and I do hope and trust our young officers will have the
“advantage of being trained in a squadron or ship under canvas, to
“follow after the training in the ‘Britannia.’ There are many who say

"it is a thing of the past; and I suppose those people are perfectly satisfied that our coal supply is practically inexhaustible. But whether it is a thing of the past or not, there is something in that training which does make the man; and I hope it will always form part of the training of our young officers and seamen."

Judging from the evidence given in the proceedings of Admiral Luard's Committee, and the written and expressed opinion of many well-known officers, Captain Moore's statement unquestionably gives the view of the Navy generally on the momentous question of midshipmen being properly educated in school work before they embark in a sea-going ship; and this, it is evident, can only be done by a later entry in the "Britannia" than at present, which is at an average of 14. Certain officers would have us copy the American and Continental Navies, and make the entry considerably later; but practically the whole weight of the Service is against them, even in these scientific days, when steam and electricity take such prominent places. A knowledge of the sea, in the broad acceptation of the term, is as essential as ever, and the sooner that can be commenced by a boy the better. From an examination of the papers written on the subject, and the evidence given by great naval authorities, 17 seems the limit of age at which boys should actually go to sea, after finishing their work in the training-ship or naval training college. It is now 16. Commander the Honourable H. Shore put the question forcibly but clearly in the following words: "There are fanatics amongst us who would persuade us that 20 is full early enough to begin to study the secrets of the sea"; or, as Commander Honner puts it: "It is no longer essential that his physical training should commence at an early age."

"Whatever may be affirmed to the contrary, the sea life is an unnatural one, from which a certain amount of hardship and discomfort is inseparable, all of which the boy of 15 or 16 accepts with good humour, if not absolute delight; while to the young man from the public school or college, with the comfortable accessories which now seem to be regarded as indispensable at those establishments, the novelty of these unnatural experiences soon wears off, and leaves a discontented mind, which cannot see the use of learning to rough it." Whilst on this subject, it may be as well to refer to a curious idea which is entertained in certain high quarters, that by extending the entry from 14 to 15½, boys will be obtained direct from the public schools. It is certainly strange that such a fallacy should have obtained the slightest credence. With a few exceptions, boys do not go to public schools till they are 14; but, even if they went at 13, is it at all likely any great public school would think it worth while to establish a diminutive, and consequently very expensive, naval class where an exceptionally advanced standard in mathematics was essential? Another point seems to have been overlooked. The public school boy of to-day has comfortable, nay, almost luxurious, quarters, and, with cricket, football, and other amusements, has an uncommonly good time of it. The change to a hammock and a chest in the cockpit, with the strict and hard life of a midshipman,

would at the very commencement of his career, in all probability, as Commander Shore clearly shows, cause a boy from a public school to be dissatisfied with his profession. There is another special objection to the wish of certain authorities who would like to specially help the great public schools to obtain naval cadetships—viz., the cost of maintaining a boy at such places. Naval men are not wealthy, and if the great public schools are to be specially favoured, the sons of naval officers will be excluded from following in the glorious footsteps of their fathers, who have made the Navy what it is.

From authoritative statements made in the newspapers, the age for entry to the "Britannia" will next year be, as already mentioned, extended to 15½, which will give 15 as the average at which the boys will compete. On referring to the opinions of schoolmasters and naval instructors, as given in Admiral Luard's Committee, boys of that age who have been well taught, and are rather above the ordinary school-boy in intellectual ability—duffers are not wanted in either Navy or Army—ought to be able to pass a very much higher standard than the present one, not by an increase in the number of subjects, but by a more thorough and extended knowledge of subjects now considered necessary. The standard to which the evidence shows the subjects might be raised is as follows. A thorough knowledge of arithmetic, algebra up to quadratic equations, four books of euclid, theory and use of logarithms, plane trigonometry up to and including solutions of triangles and mensuration, French, English composition, including very correct spelling and good handwriting, English history, geography, ordinary and physical, freehand and simple geometrical drawing, including scales.

Two subjects hitherto considered necessary might be entirely omitted, viz., Latin and Scripture. As regards the latter, it must be a puzzle to most men why such a subject was ever considered necessary in a competitive examination. Surely it might be left entirely in the hands of a boy's parents and the schoolmasters, who, whatever the faults of the latter may be, are still supposed to be Christians, and to do their duty in teaching whatever is necessary in Scripture knowledge. As regards the suggestion that Latin be abandoned in favour of a more thorough acquaintance with a modern language, there will be objections on the part of the schoolmasters; the old stock arguments that Latin is useful for learning other languages, and that it strengthens the mind by a species of mental gymnastics, will doubtless again be trotted out; but surely no man in his senses can maintain for a moment that the nursery Latin which has hitherto been considered ample for naval officers, which they drop at 13, and never touch afterwards, can have been of the least practical value, even from a schoolmaster's point of view. Many and many an Army officer, whose knowledge of Latin has been even well advanced has bitterly complained of the time taken up over a dead language when he might have been learning a living one which would have been invaluable to him in his after career. Instead of Latin, a really proper acquaintance with French should be imperative. As a hint on that point, it may be mentioned that if boys from the age of 13, when

they were fairly well up in French grammar, were sent to live with a French family every summer holidays, till they went up for the "Britannia," the colloquial knowledge they would thereby acquire would be invaluable.

If thoroughly well up to the standard mentioned, the only further mathematics necessary on board the "Britannia" would be the spherical trigonometry required for instruction in navigation. The time there might then be entirely devoted to thorough navigation and professional training, and on board sea-going ships a midshipman would not require to quit his professional instruction for schoolboy's work—he could keep up his mathematics in his own time.

For many years higher mathematics have been almost a subject of worship with certain naval officers of no small influence in the Service; but many very practical men, who stand high in their profession, are of opinion that, except for specialists, the higher flights in chasing x are not necessary for the ordinary service officer, who need not go beyond elementary mechanics and hydrostatics.

Several newspaper correspondents, some apparently naval men, deprecate, now that steam is all-powerful, any time passed under sail—boat work excepted—even when such is used merely for instructional purposes in seamanship; but nothing comes out in the evidence of our Service officers more strongly than the immense value of the masted training squadron for young officers and seamen. Captain Moore, and other well-known authorities also, recommend a special course in sea-going training-ships immediately on leaving the "Britannia." Some such system was at one time in force, but was given up, because with a large number of boys on board one ship it was found not to answer; but that defect could apparently easily be overcome by increasing the number of ships. The extra expense would be but a small item in the present Naval Estimates, and would, according to the authorities referred to, be well worth the money.

There is one subject in connection with the entry of naval cadets on which there is still a diversity of opinion, viz., as to whether the entry should be by nomination and limited competition, as at present, or by public competition. When only a small number were required, and the boys were almost children, competition, except in the present form, would have been a mistake; but it is argued that when the age is raised, as it will be next year, to $15\frac{1}{2}$, open competition, which has been so successful in the Army, would be advisable. Certainly, judging from the startling information derivable from a perusal of the results of the present examination papers, entry by public competition now seems to be an absolute necessity. Before quitting the subject of instruction for young naval officers, it may not be out of place to refer to the question of modern languages, the knowledge of which is now universally admitted to be necessary. There are certain small pecuniary inducements for officers to qualify as interpreters in flag-ships, and also regulations with reference to officers obtaining special leave to study foreign languages abroad; but the requirements of the Fleet practically make this last impossible. The

result is, that though all officers have what may be called a schoolboy's acquaintance with French, only a very limited number have passed as interpreters in that language, a few in Spanish, and some in local Oriental dialects. Only eight have passed in German, and but one in Russian. Now, considering the number of naval and marine officers in the Service, this state of things is very unsatisfactory. Every six months a perfect shoal of Army officers go up for examination in foreign languages, but it must not be overlooked that military men have opportunities and inducements for acquiring languages which are entirely denied to their brethren in the Navy. The two languages above-mentioned, viz., German and Russian, in which there are so few interpreters, are surely, above all others, the most important, now that the German and Russian Navies are so steadily rising in power. It is somewhat humiliating to have to confess that, although German and Russian are unknown to our naval officers, English is spoken by nearly every officer in the German and Russian Navies. As an assistance to naval officers wishing to work at German and Russian, would it not be possible to have Government instructors in those languages at certain large stations, such as Portsmouth, Plymouth, and Malta? Lieutenants occasionally have spare time on their hands in the afternoons when in harbour, and if the names were officially recorded of those who could even translate German and Russian at sight, it might be an inducement to commence a more thorough study of those languages, more especially if substantial money rewards were given, as in the Army, for passing an interpreter's examination in Russian. Smaller prizes might be given for passing in German. Marine officers, when with their headquarters on shore have the same opportunities of acquiring languages as any linesman and if placed on the same footing as the Army, would doubtless furnish a considerable number of interpreters. When referring to the Marines, there is another subject which might be made their speciality, viz., military or naval law. On looking over the syllabus of instruction at Greenwich, the subject does not seem to be included. Lectures on international law are given, but the simple requirements for court-martial work, such for instance, as admissible or non-admissible evidence, does not seem to be taught. If some Naval or Marine officer would put together a little hand-book on the subject, similar to that used by the cadets at Sandhurst, it would probably be found very useful. As Marine officers cannot be members of courts-martial on board ship, they would seem to be the proper persons for making law a special study with a view of being always available for the work of Deputy Judge Advocate, or to give legal advice whenever such might be required.

Before commencing the subject of military education, an apology is necessary for a soldier having ventured to refer to naval matters, but the naval system has been a most useful object lesson for the military service, and the rest of the lecture it is hoped will show how much we have profited by it. To the public at large the Navy is of absorbing interest, and although both the Services are, so to say, dependent on each other,

the necessity for the predominant partner being all-powerful must be apparent to everyone. If the Army were entirely destroyed to-morrow, marine garrisons of the coaling ports excepted, and we yet retained command of the sea, we could, in due time, raise another Army, and re-conquer all that might have been lost; but were the British Navy destroyed, the Empire then and there would be at an end.

PART II.

That the system of training young naval officers which was so effective 30 or 40 years ago, and which produced such splendid results, requires some change, to meet the altered conditions of the present day, seems in the opinion of naval experts to be unquestionable; but what those changes should be is entirely a naval matter. Nothing more will now be said on the subject, except to show what a grand object lesson of perfection the Navy has been to the sister Service.

But a generation ago, what was the condition of the Army? We had certainly a number of fine regiments, with a considerable leaven of officers who had seen service in the Crimea and India, but with such a feeble system of army organisation that in a few years matters would in all probability have drifted back to what they had been before the Crimean War. The 'needle-gun' in the Schleswig-Holstein campaign of 1864 produced an uneasy feeling with regard to our small-arms, and the six weeks' war, which proved how powerless the old-fashioned organisation and arms of Austria were against Prussia, showed the country that it was about time we re-organised our military system; but it was not till the Franco-Prussian War of 1870 that we at last saw in what a fool's paradise we had hitherto been living, and that a system perfect on a barrack square was now obsolete. Before the Prussians opened the eyes of Europe as to what military efficiency really meant, we had been content to imitate, even in dress, the army of our old allies of the Crimea, and believed that the organisation which had conquered at Magenta and Solferino was quite good enough as an example for us; but even in those days our military system was very far behind that of the French. The only enemy a British regiment was really prepared for was the general at his half-yearly inspection, when a good march-past, and the correct performance of curiously intricate manœuvres, followed by the usual inspection of books and barracks, terminated by a champagne lunch, was all that was considered necessary. Certainly at that time a British regiment at home was a sight worth looking at; no other nation could show men more perfect in their drill or their equals in height and breadth of shoulders; but that real training for their *raison d'être*, viz., the day of battle, was practically unknown. It will now hardly be credited that any reference whatever to a professional subject at mess was then punished by a fine, and as for a colonel making the instruction of his officers in all matters connected with active service his special, personal duty, such a thing was almost unheard of; the daily parade, an hour in the orderly room telling off prisoners and signing papers, was about the sum total of his work. It seems hardly possible to believe that those

easy, comfortable days of soldiering, when competition and incessant examinations were unknown, and when the lively and somewhat uneducated British subaltern had such a good time, existed but a quarter of a century ago. Now the regimental officer can hardly call his life his own; not only are his days fully taken up with professional training, but his night's rest is often sadly interfered with in learning how to march his men across country in the dark, steering by the stars or by aid of a phosphorescent compass, hardly to be seen in the pouring rain. The severe and incessant instruction which the British subaltern has now to undergo, and the little he gets for it, might be supposed to cause a falling off in the number of those wishing to enter the Army; but the reverse is the case. So anxious are young gentlemen for commissions, that the military authorities are able to make a selection from the best educated of the crowd of candidates—a matter of immense importance now that intellectual ability is so necessary.

Our uniformly successful small wars since 1882 already show how much we have advanced in military efficiency as compared with not so very many years ago, when we were getting quite accustomed to disaster and defeat. Continental Powers, whose unfortunate failures in colonial expeditions have lately been so frequent, will doubtless before long come to this country for information, as the French War Office did some 70 years ago, when they sent over to enquire into the organisation of the Old Staff School at High Wycombe, which had supplied such excellent material to Wellington in the Peninsula.

The present system, which selects its young officers by competition, instead of taking any schoolboy who had money enough to purchase a commission, naturally does not meet with the approval of those schoolmasters who formerly had the instruction of aspirants for the Army in their hands, and therefore an easy time of it. Finding that the little they teach does not enable their pupils to get into the Service, they and their friends in desperation calmly suggest that a good score at cricket or football ought to be considered an equivalent for education, apparently like the Chinese being of opinion that the man who can bend the strongest bow or throw the heaviest spear makes the best officer.

Many people, otherwise well informed on general subjects, seem by the correspondence which has lately appeared in the newspapers to have an idea that there really is something in the physical test theory, curiously overlooking the well-known fact that an active mind usually belongs to an active body, and that if a physical competition test were instituted, it would be found that boys who can work well are in all games the superiors of those who are so wanting in go and determination as to care for nothing but amusement. The Public Schools Enquiry Royal Commission of 1864 has apparently never been heard of by those disappointed parents who so persistently hold up the ancient public schools as perfection. The Commission was composed of some of the greatest and most able men in the Kingdom. Here is their verdict on the education of the public school-boy:—"If a youth after four or five years spent at school quits it at 19 "unable to construe an easy bit of Latin or Greek without the help of a

"dictionary or to write Latin grammatically, almost ignorant of geography
 "and of the history of his own country, unacquainted with any modern
 "language but his own, and hardly competent to write English correctly,
 "to do a simple sum or stumble through an easy proposition of Euclid,
 "a total stranger to the laws which govern the physical world and to its
 "structure, with an eye and hand unpractised in drawing, and without
 "knowing a note of music, with an uncultivated mind and no taste for
 "reading or observation, his intellectual education must certainly be
 "accounted a failure, though there may be no fault to find with his
 "principles, character, or manners. We by no means intend to represent
 "this as a type of the ordinary product of English public school
 "education; but speaking both from the evidence we have received and
 "from opportunities of observation open to all, we must say that it
 "is a type much more common than it ought to be."

"The class lists and lists of prizemen at the two Universities furnish
 "something like a criterion of the attainments in scholarship and mathe-
 "matics of the abler and more industrious boys; these, however,
 "notoriously form a small proportion of the boys at Oxford and Cam-
 "bridge who receive a public school education. The great mass of such
 "boys expose themselves to no tests which they can possibly avoid, and
 "there are hardly any data for ascertaining how they acquit themselves
 "in the easy examinations which must be passed in order to obtain a
 "degree."

"The best classical scholars at the Universities, it was generally
 "agreed, come from the old public schools and those modern ones
 "which had been framed on the same model; the public schools send
 "also (and in this Eton has a certain pre-eminence) the idlest and
 "most ignorant men."

In order to test the matter themselves, the Commissioners proposed
 that all the schools under investigation should undergo an examination
 on certain subjects of instruction on an appointed day. Rugby, under
 Dr. Temple; and Shrewsbury, under Dr. Kennedy, were willing; but all
 the others declined.

Mr. Gladstone, writing to a member of the Commission, August 22nd,
 1861, says:—"We still hold by the classical training as the basis of a
 "liberal education. Parents dispose of their children in early youth
 "accordingly; but if they were asked why they did so, it is probable
 "they would give lamentably weak and unworthy reasons for it, such, for
 "example, that the public schools and Universities open the way to
 "desirable acquaintances and what is termed good society." He also
 states as follows:—"The amount of work which we get out of the boys at
 "our public schools, speaking of the mass of them, is scandalously
 "small."

It will be said that although the above very unsatisfactory state of
 public school education unquestionably existed some thirty years ago,
 great changes have since taken place, and superannuation regulations at
 all the ancient public schools, which alone are referred to by the Com-
 mission, have brought about an immense reformation, and greatly raised

the standard of their education ; but let a headmaster be as anxious as he may to reform, it is almost impossible for him entirely to alter in a single generation the ways and traditions of a school which has been in one groove for hundreds of years, more especially when, as a rule, masters and instructors have themselves been brought up in the school. There is also another force which is opposed to any great changes. The boys' fathers, and, in many cases, grandfathers, have been at the same school, and with that conservative feeling common to the well-to-do portion of the community, which so strongly objects to any alterations, they believe that what was good enough for them must be good enough for their children. The immense wealth of the country also operates as a check against more work at certain great schools ; there are in the United Kingdom a very large number of boys born with the proverbial silver spoon in their mouths who know they will not have to exert themselves to make a living, and, as Mr. Gladstone points out, entrance to the ancient fashionable schools means, for certain who require it, entrance to society. The lists of those schools are consequently crowded with the names of wealthy boys waiting their turn, a state of things which cannot be displeasing to the masters ; and if a boy's father is dissatisfied with the instruction given, he is politely informed that such is the system of the school, and if he does not like it he can go elsewhere.

An instance of this feeling is given in the Report of the Royal Commission of 1864, when the Headmaster of Eton was examined with reference to the boys being taught French.

Lord Clarendon : Would it not be considered necessary by the authorities at Eton to render obligatory a thing which they think ought to be part of an English gentleman's education ?

Answer : I should not.

You would not consider it necessary to devote any part of the schoolboy's time to its acquaintance ?

Answer : No, not a day.

You do not intend to do so ?

Answer : No.

Do you not think that it is a matter which a boy should be required to learn ?

Answer : He ought to learn French before he came to Eton, and we could take measures to keep it up, as we do English.

What measures would you take to keep up French, and, I may add, what measures do you now take to keep up English at Eton ?

Answer : There are none at present, except through the ancient languages.

You can scarcely learn English reading and writing through Thucydides ?

Answer : No.

Sir S. Northcote : You do not think it is satisfactory ?

Answer : No. The English teaching is not satisfactory, and, as a question of precedence, I would have English taught before French.

You do not consider that English is taught at present ?

Answer: No.

This evidence was given several years after the Prince Consort had given a special annual prize for modern languages at Eton.

As an instance of parents believing that what was good enough for them is good enough for their children, an old Etonian, giving his evidence in favour of the system there, said he could not see the use of modern languages for an ordinary English gentleman. French was not spoken in England, and whenever he commenced to speak it on the Continent he was always answered in English. Fortunately for England, such was not the opinion of an English lady, the Countess of Mornington, rather more than a hundred years ago. Her son, Arthur Wellesley, was at school at Eton, but she was so dissatisfied with his progress there that, after his remove, she took him away, and sent him to the Military School of Angers, in France, where he became a thorough master of French, and must have been well grounded in the rudiments of his future profession, which he certainly could not have learned at Eton. That the stern Duke ever made such a gallery remark as that attributed to him about the playing fields, is too amusing for belief, except by a very juvenile school-boy, who naturally prefers amusement to lessons. The playing fields of our schools and colleges have unquestionably a very beneficial effect, but that is hardly a reason for making them an excuse for the failure of so many boys when tested for ordinary educational requirements. Boys in this country take to games which require energy, determination, and physical endurance, as ducks to water. It is born in them, as is also the love of sport, more particularly if there is any danger in it. Even when getting on in life, more than one old officer has been unable to resist the fascination of such risky work as following up on foot a wounded tiger or crawling into a bear's den, paying with his life for those irrepressible hereditary instincts which are the common property of our race. To imagine that boys require to neglect their lessons in order to be encouraged to amuse themselves with manly outdoor work is too absurd; yet, judging by the letters in the newspapers, there are some curiosities who really know nothing about boys. If such individuals would turn their attention towards stopping the very comfortable and almost luxurious style of living which exists in some well-known schools, to the detriment of the parents' pockets and the mental fibre of the boys, they would be doing some good. Pampered at such school-houses, and almost encouraged in idleness by masters, it is no wonder so many boys fail in competitive examinations, and have to be sent to crammers at an age when schoolboy treatment and discipline is impossible, and the young men develop undesirable habits which really commenced in their school boarding-houses.

Public school life, such as that under Dr. Arnold, of Rugby, which has been made the model for so many modern public schools, is about the very best training a boy could receive; but, by a curious process of reasoning, that system is apparently believed by certain civilian officials to exist only amongst the ancient classical public schools, where Latin and Greek are the first consideration, and modern languages and science

a secondary matter. Such colleges as Marlborough, Clifton, Cheltenham, Wellington, Haileybury, Bedford, and many others, which are up to modern requirements, and where a really liberal education is encouraged, are handicapped in favour of the fashionable, high-priced schools which still have an inclination for the ancient system of instruction. It is true these old schools have established what are called Army classes, thereby confessing that the school is unable to teach thoroughly those subjects which, in the present day, every gentleman ought to be acquainted with, and without which it is difficult, if not impossible, for a boy to succeed in any profession.

Previous to 1870 the entrance examinations for Army candidates had been conducted by the Council of Military Education. On the recommendation of Lord Dufferin's Royal Commission of 1869 and 1870, the examinations were handed over to the Civil Service Commissioners, who were to act as ministers for the War Office in respect of these examinations. The Civil Service Commissioners are two in number reporting annually direct to the Crown, and this report is laid before Parliament. The Commissioners communicate with the Admiralty and War Office as regards any suggested change. The Secretaries of State for these two departments are officially responsible for the regulations for admission to the Army and Navy, but practically in the matter of civil education the Commissioners formerly ministers are now masters of the situation, as their reports and correspondence show.

Lord Dufferin's Commission designed a scheme of examination "with a special reference to the curriculum adopted at the most advanced of our public schools and with the express intention of enabling the competitors to come straight from one of those establishments to the examination hall without having any occasion to resort to any intermediate place of study." The subjects for examination recommended and adopted were as follows:—Mathematics as far as Plane Trigonometry, English, Latin, Greek, French, German, Science, and Drawing, a selection of six of these subjects being made at the option of the candidate. This test was a suitable one for the most advanced of the public schools referred to in Lord Dufferin's Commission, but it was very far beyond most of the great public schools, which were at that time still in the state reported on by the Public Schools Enquiry Commission of 1864, consequently boys educated at those schools who wished to enter the Army had to go to private establishments for special instruction. This was considered a grievance by the headmasters of the schools in question, who complained to the Civil Service Commissioners.

A few slight alterations were made at different times, but in 1883 the whole matter was laid before a general conference of headmasters representing the education of the United Kingdom, who submitted a scheme not differing very materially from that already in force, the special alteration being the elimination of a subject specially favourable for cramming, viz., English literature, but those candidates who wished to take up French and German instead of Greek and Latin were still to be allowed to do so.

The Commissioners also submitted a scheme specially favourable to the great public classical schools, in which Latin was to be made compulsory. The scheme of the headmasters was practically adopted after 1884 and remained in force till 1891, giving apparently general satisfaction, except as regards the marking of sciences for Woolwich; but in 1888 the Civil Service Commissioners represented to the Director General of Military Education that the English of some of the candidates was bad and slangy, and recommended that Latin should be made obligatory. This suggestion was adopted, although at variance with that of the Schoolmasters' Conference of 1883. This new scheme came into operation in 1891.

By a strange misnomer, the expression "obligatory" did not mean that a candidate must pass in Latin; he could be successful without taking up Latin at all, if he made sufficient marks in other subjects. What it did mean was, that the right of taking up two modern languages in Class 1 was to be denied him, but that Latin might be substituted for one of them. The late Director-General of Military Education, in his evidence before Lord Sandhurst's Committee of 1893, states as follows: Latin was introduced as an obligatory subject at the special request of the Civil Service Commissioners. "I may say that the reason why they introduced "Latin was because it appeared to be the only chance of obtaining boys "who had studied grammar, and who, therefore, could express themselves "grammatically, since English grammar is not taught to boys in the "upper classes."

Mr. Roby: Did the public school authorities say, to get a good knowledge of English, the boys ought to learn Latin?

No; not the public school authorities. We had no communication with them. It was done entirely on the suggestion of the Civil Service Commissioners.

The Senior Commissioner, in giving his evidence subsequently, seemed to think the Director-General of Military Education was under a misapprehension as regards the recommendation referred to, which was made solely on the ground that Latin was universally taught in the schools. Now, considering the momentous nature of the alteration, this misapprehension was most unfortunate. The official statement on the subject is as follows: "While observing with regret that the number of "candidates competing directly from public schools was less than it "ought to be, it was their opinion that the effect of the existing "regulations was to discourage the candidature of boys educated in the "classical departments, thus excluding from the competition many who "had received the soundest and most liberal training which the public "schools afford." Evidently the ideas of the Commissioners as to what constituted a sound and liberal education and those on the Royal Commission on Public Schools were somewhat divergent.

A Committee of headmasters is mentioned in the official correspondence as having been held at this time, but the only one known of was a small private conference of eight headmasters, in which three were opposed to the views of the Commissioners.

In December, 1890, modern languages were still further handicapped by reducing the marking for colloquial knowledge from 400 to 200, the Commissioners stating as follows:—

- “1st. The high rate of marking for colloquial French or German
 “has a mischievous effect on the education of the candi-
 “dates, as it encourages them to obtain a superficial
 “readiness in conversation, to the neglect of what is of
 “more fundamental importance in the accurate study of the
 “languages.
- “2nd. There is no proportion between the severity of the test
 “applied to measure proficiency in the oral part of the
 “examination and that which is applied to paper work,
 “since, while the time devoted to the *vivâ voce* examination
 “of each candidate is for the sake of reasonable dispatch
 “limited to ten minutes, the time spent upon the paper
 “work amounts to three hours.”
- “3rd. While it is the expressed wish of the military authorities to
 “obtain as many candidates as possible direct from the
 “English public schools, the effect of the present marking
 “is, as the Commissioners have reason to believe, to cause
 “the withdrawal of boys from the English public schools
 “to private establishments on the Continent.”

The statement about the inability of an examiner to ascertain in ten minutes whether a boy could speak fluently in a foreign language or not, is decidedly astonishing. It is said history repeats itself; it certainly is instructive to find it doing so in the matter of education. Even Chaucer, in his “Canterbury Pilgrims,” is satirical about French taught in England. Of the Prioress, he says:—“French she spake full fair and “elegantly, after the school of Stratford-atte-Bowe, for French of Paris “was to her unknown.” The most rabid admirer of the customs of the ancients could hardly have even dreamed of what the Commissioners recommend, viz., that in certain educational matters we should go back to what was so sarcastically condemned even 500 years ago. The Commissioners drag in the military authorities as approving of their views. Now, if there is one subject more than another which all soldiers consider necessary, it is that the knowledge of modern languages should be encouraged to the utmost. Such was the opinion of H.R.H. the Duke of Cambridge; and of all men, there is no greater advocate for it than the present Commander-in-Chief and his staff at Head Quarters. The marking in colloquial knowledge has now, in consequence of the recommendations of Lord Sandhurst’s Committee of 1893, been raised from 200 to 300, and it is to be hoped that the military authorities will get back again the other hundred taken away by the Commissioners in 1891, and also be able to restore modern languages to the place they held in Army entrance examinations up to the same year. By regulations just issued, Latin need not be taken up as a subject, but only one modern language is still permitted in the obligatory subjects, which practically leaves the matter precisely where it has been since 1891, that is to say, Latin is really

just as compulsory as ever, because no boy can risk losing the marks even a limited knowledge of it might give him. As all who have considered the question know, a *thorough* knowledge of Latin or Greek is no mean acquisition in mental training and higher education; but the regulations lately issued really encourage just that amount of Latin which suits a boy indifferently educated at a classical public school. In 1895, out of 120 candidates who were successful in getting into Sandhurst, only 18 scored over two-thirds marks in Latin, and but 15 took up Greek. Surely that is a poor result after seven or eight years' daily study, and one the classical masters cannot be particularly proud of.

By all means allow the boy who has been *well* taught in Latin, and also Greek, to benefit in his examination thereby; and this could easily be done, and modern languages allowed their just place, by removing Latin from the obligatory to the voluntary subjects, and permitting three instead of two subjects to be taken up in that class, one to be a language, viz., Latin, Greek, or German; if German had been taken up as the one obligatory modern language, then French might be substituted for it in the voluntaries. Were this alteration made, which, it may be observed, would then make the examination what the Headmasters' Conference suggested in 1883, a better test of a really liberal education could hardly be devised. It is by no means suggested that Latin should be eliminated from the education of Army candidates; it ought, whenever possible, to form part of every boy's education, but, at about the age of 14, when a boy has been through the Latin grammar, and can translate, say Cæsar, with facility, it would then be time to consider whether it would be more advantageous for him—his mental qualifications being considered—to continue Latin or to take up a second modern language.

Lord Sandhurst's War Office Committee of 1893 on Army entrance examinations gives the latest information on the subject. The witnesses who gave evidence were H.R.H. the Commander-in-Chief, the Adjutant-General, the Director-General of Military Education, the principal headmasters, and many others. The Committee issued its report in 1894. The recommendations were principally in matters of detail, and were to the effect that English ought to be raised from 500 to 1,000, and a colloquial knowledge of a foreign language more highly marked; that candidates, if they so wished, ought to be allowed to take up two modern languages, instead of one ancient and one modern; and that the qualifying educational minimum for privileged and Militia candidates should be raised.

Three of the nine members of the Committee differed from the others, their principal objection being with reference to the Committee's recommendation encouraging the study of modern languages. One of the objectors being also one of the two Civil Service Commissioners, could not well stultify his department with reference to its recommendations of 1888. Another objector had passed many years of his youth at a great public school where classics only were considered worth teaching, and was, doubtless, still dominated by strong feelings on the subject.

The Committee's recommendations have been practically carried

out, except in the matter of languages, in which there is to be no change, showing thereby that the two Civil Service Commissioners are more powerful than the Commander-in-Chief and all the War Office authorities put together, although the Committee's proposals were in accord with the Headmasters' Conference of 1883, which expressed the general opinion of all the large schools of the country.

From the wording of their report in 1888, it is evident that the Civil Service Commissioners fear that if German, for instance, were placed on a level with Latin, as regards marks, boys intended for the Army would leave certain public schools about which the Commissioners seem to be so anxious. Such might have been the case thirty years ago, when the old-fashioned public schools could teach nothing but Latin and Greek. A perusal, however, of the evidence given before the 1894 Committee shows that the small Army classes which now exist in those schools in no way interfere with the work of the schools, the candidates who attend them simply paying for the special coaching necessary for competitive examinations, precisely as they have to do in other educational establishments. To suppose that allowing boys who wish to do so to take extra lessons in German, instead of Latin, would thereby cause the boys to leave the school is utterly incomprehensible; and yet it is, apparently, on this extraordinary idea that the Civil Service Commissioners are acting.

It may be useful to note that, notwithstanding the efforts made to assist what in former days were known as *the* public schools, specially referred to in the Royal Commission of 1864, the number of Army candidates who pass from them direct into Sandhurst and Woolwich is, considering that these schools number between 2,000 and 3,000 boys, very small. Only twenty-three went to Sandhurst in 1894, and twenty-nine in 1895; rather less than half that number went to Woolwich. In the annual report of the Board of Visitors to Woolwich and Sandhurst is a detailed list, showing that the cadets now come from all the large schools and colleges in the United Kingdom. Only one Sandhurst cadet is mentioned in the last report as having been educated at a private school. The parentage of the cadets is fully given; it is very good indeed. Lord Dufferin's Royal Commission of 1869-70 specially points out the class of public schools from which officers should come, viz., "the most advanced of our public schools." The Civil Service Commissioner in his evidence speaks of "the great public schools"; but on that point Lord Sandhurst's Committee are determined there shall be no mistake as to what they mean:—"The Committee desire to be understood to use the 'term 'public schools' as including, not merely a few well-known large boarding schools, but all large schools of a public character giving secondary education."

The Sandhurst course lasts eighteen months. It is entirely professional, and really perfect for the object intended. Not only are the cadets thoroughly well taught all the indoor work in connection with field fortification, tactics, topography, military law, military organisation, and regimental interior economy, including making up soldiers' pay and

mess sheets, ledgers, etc., but they also receive complete practical outdoor instruction in the three first named; doing with their own hands all the necessary part of field works, making bridges across streams and ravines, tent pitching, construction of field kitchens and ovens, sinking wells, filtering water, road making, etc. Continual instruction is also given in that very important part of a young officer's training, viz., advance and rear guards, outposts, rapid sketching, and report writing. In addition to these, not only is ordinary drill taught, but also what is of so much value, viz., word of command drill, as is also riding, rifle, revolver, and sword practice, with a very stiff course of gymnastics and such capital training as six-mile races across country. The discipline is exceedingly strict, and even in such matters as turning out for parade, the slightest speck on any part of the clothing or accoutrements, from cap to boots, brings down a reprimand or punishment. The only addition possible to the Sandhurst training would be what is known as a bread-and-meat course, which enables a young officer to see that the rations of his men are thoroughly up to standard. A little practical instruction in field-cooking would also be advisable, and, perhaps, a few hints about clothing and boots; and now that young officers are responsible for so many regimental funds, it would be advantageous if book-keeping were made an obligatory portion of arithmetic on entrance. The extra time required for carrying out these suggestions might be obtained by lessening the number of drill parades in the second and third terms.

If the Board of Visitors to Woolwich and Sandhurst who think that because the cadets have so much practical outdoor work it therefore acts as an antidote to the class-room, and consequently they must have too easy a time—would only sleep one night in the College, rise at reveillé, 6.30 a.m. summer and winter, and go through the ordinary obligatory day's work of a cadet—it is more than probable they would be only too thankful when 10 o'clock came and they could rest in bed.

Those grumblers who write to the papers and insist that because the cadets have passed into Sandhurst successfully in severe competition, they must therefore be bookworms, would have their eyes opened by going to the College when the annual sports take place in May. Then may be seen not a mere handful of specialists in certain games, as in public school or college matches, but a set of as fine young athletes as the country can produce, who on the termination of their 18 months' course could walk round a similar number from Oxford or Cambridge like a cooper round a cask. The medical examination for entrance is now rightly so excessively strict and the physical training and exercise at the College so good, that Sandhurst turns out a body of young men for whom a trainer of gladiators in ancient times would have given many *aurei* to be able to pick his men. The average age on leaving is nineteen years and ten months; average height, 5 feet 9½ inches; chest measurement, 36 inches; the young fellows from their severe and excellent training being hard as nails. Although the Militia and University candidates are older than the Sandhurst cadets on getting their commissions, their average height is as nearly as possible half-an-inch less, and chest

measurement one inch less. That an active mind as a rule goes with an active body is shown in an instructive way at Woolwich, where the cricket and football teams are nearly always found to contain a much larger proportion of cadets who ultimately stand at the top of the class lists and get engineers' commissions.

At Woolwich class-room instruction in modern languages is still obligatory. On that point the Academy might take a useful lesson from Sandhurst, and require that all languages should be passed on entrance. The same might be the case with mathematics; the ordinary gunner does not require to go beyond statics and dynamics; higher mathematics might surely be made a voluntary subject for engineer and gunner cadets who intend to become specialists. This would then allow more time to be given to electricity, hydraulics, and even steam, all of which are now so extensively employed in gunnery. A knowledge of military law and administration is essential for all officers, but neither subject is now taught at Woolwich. If there were less plan drawing and printing titles, etc., at which a civil engineer with his stencil plates would be so amused, it might be advantageous. Whilst on the subject of time misapplied, it may be not out of place to hint that such is even the case at the Staff College, where the officers have to give a certain amount of attendance to French or German. This may be got rid of by passing the required examination at the end of the first year. Why the officer students should not be allowed to do so on entrance is a puzzle. Surely at a place like the Staff College, with its special training, it is a waste of time to work at a language which can be much more easily learned abroad. A certificate at the examination for interpreters, that the officer has passed in French or German ought to exempt him from further attendance on such subjects, and if such certificate were compulsory when applying to enter the Staff College, it would be a move in the right direction. As a precedent it may be pointed out that the study of mathematics at the Staff College was abolished a few years ago, much to the advantage of all concerned.

Some people have an idea that if a cadet does not work at French or German between the ages of 17 and 19, he will forget his foreign language, even if well up in it. A greater mistake could not be made. Hundreds of officers who have never spoken a word of French or German after 17—having gone straight out to India—find, even years afterwards, on going to the Continent, that after a week or two the language all comes back to them. Of course such only applies to those who really know French or German, and have a good colloquial, and not a mere school-room, acquaintance with it, such as the Civil Service Commissioners approve of. Cadets so educated would forget a language at 19 as easily as at 17.

There remain now but two subjects for consideration, viz., cavalry commissions and entrance to the Army through the Militia. Owing to the present expensive style of living in cavalry regiments, where a subaltern requires a private allowance of £600 a year—just double what it was a generation ago—there is such an absence of candidates for cavalry

commissions that the military authorities have been obliged to bring down the educational entrance test to the level of the *jeunesse dorée* who are sufficiently rich to stand the cost of living in a cavalry regiment. Half the cavalry officers pass through Sandhurst and half through the Militia. In both cases they are on separate lists, which, in point of marks, are a long way behind the lowest of those competing for the infantry. Now, if there is one service in the present day where active brains are required it is the cavalry, by whom so much reconnaissance work will have to be done in the future. The report of a subaltern pushing well to the front may be of immense value if he is an able man and can send in concise, clearly-written information; whereas a dunder-headed young officer may possibly be the cause of something like disaster. Cavalry officers ought now to be the picked men of the British Service, but until cavalry expenses are very greatly reduced the country will have to be satisfied with what now comes forward. Could the cost of living be brought back to what it was—and old cavalry officers say that it is quite possible,—if commanding officers were only obliged to obey the Queen's Regulations—there are many born cavalry soldiers in the infantry, men like the late Sir Herbert Stewart, who would gladly take a transfer to a branch of the Service for which Nature intended them. That the nation will some day have cause to regret the present system, is only too certain. Unfortunately, the example of the cavalry is gradually extending to other branches of the Service, and must, in time, have a very pernicious effect on the British Army; but the discussion of this subject would be here out of place.

As regards the Militia, it is now a good many years since the dearth of subalterns in the Militia so alarmed the military authorities that in desperation they decided to give a certain number of commissions in the Line to Militia subalterns, in the hope that such a scheme would fill the vacant lists. The number of commissions so given is about 120 annually, and has had the desired effect—on paper. The young gentlemen who enter the Militia are simply birds of passage, and either leave it when they join the Army, or when they fail to do so (there are now over 500 vacancies). With their very limited service and experience, the subalterns of the Militia cannot, as a rule, be really counted in any way as effective officers, but the scheme, when started, looked well in print; possibly it was never intended or expected it should do anything else.

Militia candidates desirous of entering the Army have to pass a qualifying literary examination, and a competitive one afterwards amongst themselves, in theoretical knowledge of certain military subjects. The candidates are made up of those who fail to get into Sandhurst, and a very few who take to soldiering rather later in life. The qualifying literary test is not a hard one. At present it is 4,500 marks, that is about 2,000 below the lowest score which will get into Sandhurst, but it is to be gradually raised, the Adjutant-General having pointed out that so many Militia officers subsequently failed to pass their ordinary Army examinations, consequent on a defective education on entrance. Except in arithmetic, there is practically no minimum, even in such an important

subject as English (writing, spelling, and composition of a simple essay). Militia subalterns who actually have made only one single mark out of 1,000 have passed, and been reported by the Civil Service Commissioners as qualified, in an educational point of view, to hold a commission in the British Army. With the exception of administration—regimental interior economy, pay lists, etc.—one of the most important things taught at the Military College, the subjects for the Militia competitive are the same as those enumerated at Sandhurst, namely, fortification, tactics, law, and topography; and to learn them sufficiently for a successful pass, at least a year's work with a crammer is necessary, but the examination is a paper one only; no practical knowledge of the subjects, which is so thoroughly taught at Sandhurst, is required; neither is there any test in athletics as at the College. Under these circumstances, it seems to be an absolute necessity that on successfully passing the Militia competitive examination, the young officers should be sent to Chatham, or a special school at Aldershot, for a three months' strict course of practical work in those subjects of which they have only a theoretical knowledge. It may be said the D.A.A.G. instruction will do all that is necessary in that respect; but let the instructor be as earnest and energetic as he may, he can never impart in a course of twenty-one days that thorough grounding in practical work to which a year and a half is given at Sandhurst.

Now that the scheme of filling the subaltern ranks of the Militia by Army candidates is seen to be such a failure, as far as the efficiency of the Militia is concerned, the sooner it is abandoned the better, and all candidates passed through Sandhurst. A commencement might be made by the Indian Government supplying room at the College for the cadets for the Indian Staff Corps who are always there. All cadets for the Indian service were formerly trained at Addiscombe or obtained direct commissions, now the Indian Government draws on Sandhurst for what it requires. If 35 additional vacancies were thus available every half-year, then that number of candidates who just failed to get into Sandhurst would go there instead of through the Militia. This would be an immense boon to them, and the Militia would really lose nothing in being deprived of such birds of passage, who simply make use of it for their own convenience for two trainings of one month each. At present 240 cadets pass through Sandhurst annually; of these 70 join the Indian Army and 8 go to West Indian Regiments, and 162 are available for cavalry, guards and line. If the Indian Government will find the necessary accommodation at Sandhurst, or if the time there could be lessened for a cadet's course, then the Militia candidates might be reduced to 50 annually, and Sandhurst would supply 232 instead of 162, which in the interests of the British Army is very desirable.

There is but one subject more to refer to, and that is the low standard of eyesight which will pass a young gentlemen into the Army, $\frac{1}{8}$ of normal vision is all that is required. With such defective sight it is impossible to count accurately the number of men in a group at 50 yards, to see a man at a quarter of a mile, or a mounted man at half a mile.

In night attacks, when the light is very little, a man with only $\frac{1}{8}$ normal vision would be really quite blind. The number of officers with such defective sight is small, but with the present competition there ought to be none.

Vice-Admiral Sir NATHANIEL BOWDEN-SMITH, K.C.B. :—In the few remarks which I shall make upon this paper I will confine myself entirely to the naval side of it, and only to that part referring to the entrance and training of junior naval officers. For many years I have been in favour of open competition for naval cadetships in preference to the so-called limited competition which exists at present, with the exception of reserving a certain number of nominations for the sons of naval officers, who would be required to qualify only; and the facts and figures which Major-General Tulloch has put before us this afternoon go a long way towards confirming my opinion. He tells us that in the June examinations for 1895 only 113 cadets qualified from those nominated, of which about 70 obtained cadetships; and in the June examinations of last year only 110 qualified, of which about 60 obtained cadetships; so that if, as we are given to understand, three nominations are given for every vacancy, only about half of those who are nominated are able to obtain qualifying marks. I call that a very limited competition indeed, but there is something more than that behind this system. If you were to take up a list of the successful candidates, as I have done in years gone by, and examine the marks obtained, you would probably find that the list has a very poor tail; that is to say, you would find five or ten boys at the bottom of the list who had obtained very low marks; had in fact only just scraped through. They have been brought up to this point by successful cramming before passing into the "Britannia," and when on board they are again crammed to pass out, but after they leave the "Britannia" all this pressure is removed. The boy is no longer compelled to work, so that if he is idle or has no ambition he does no more work; he not only does not make any further progress, but he forgets what he has already learned, and that I believe accounts for a great deal of the disappointment caused by some of these young officers when they go up to Greenwich for their final examination. There is yet one other point about this system which is perhaps not sufficiently considered. The "Britannia" is a very cheap school, and the naval education is, a very cheap training, and fits a boy for many walks in life, besides the actual one he goes in for. Therefore, a father with many sons, knowing he can get a nomination for the asking, is very much tempted to put a boy into the Service, whether he likes it or not, with the result that sometimes they leave after they get to man's estate. I may mention a case which took place when I was in the "Britannia." The father of a boy told me one day in confidence that he had only two sons, the cadet at that time on board, and an elder son, a midshipman afloat, and he was not sure that either of them would remain in the Service eventually; but he thought the "Britannia" such a good school, and the naval training so good, that being able to get a nomination for the asking, he had taken advantage of it. We do not want our officers to leave after they have been trained. Major-General Tulloch takes exception to the variety of subjects taught on board the "Britannia." He says that the number of subjects exercise undue strain upon the boys, and that they cannot digest them all. I am not quite in accord with him, because although the subjects taught on board the "Britannia" are very numerous, some of them partake more of the nature of recreation or out-of-door exercise than actual studies. I will give you an example. Suppose, for instance, a class of boys after breakfast go in for their forenoon study, which is devoted to mathematics and French; the first two-thirds of the time to mathematics, then a slight interval, and then French. Both those subjects require great concentration of thought, and an effort of memory, there is no doubt about that; but after dinner that same class of boys go on board the tender, where they handle the sails, or

they go in the boats pulling and sailing, or it may be their turn to go into the chart-room, where they are set to work to draw charts, and to learn the use of nautical instruments. In that way a great variety of subjects can be taught without putting any undue strain upon the boys, and most decidedly the school hours were not at all excessive in my time. I think, now the boys are entering a little older, we might quite well give them two hours a week more study on board the "Britannia." With regard to the entrance examination, I think it should be as broad and comprehensive as possible, so that boys from any part of the Empire would have a fair chance of competing, no matter what their previous education had been. I am not, therefore, in accord with my gallant friend in proposing to eliminate Latin and scripture history from the entrance examinations. Latin being the foundation of so many languages is very properly almost universally taught, and I must say I never regret the small amount I did learn myself before I went to sea. Of course it is a subject which, when they go into the "Britannia," ought to be dropped, and I do not think even in the entrance examination it ought to be a compulsory subject. Indeed it cannot be so, because the gallant lecturer tells us that one boy who was successful obtained only four marks out of a possible 300 for Latin. Then again with regard to scripture history, the Bible being the foundation of the religion of most civilised nations, is very generally taught. If we put aside the religious part of the question, it is surely a classical work of great value containing very beautiful language, which is often referred to by writers and poets, and is also frequently quoted by orators and even statesmen; moreover it is a book which has influenced the minds of millions of people in the past, and I venture to think will influence the minds of millions in the future, and therefore ought generally to be taught to boys. But I do not think we should continue this subject as a compulsory one after the boy joins the "Britannia." I am not in favour, after a boy gets a certain age, of cramming anything down his throat, especially in the nature of religion; and now they are entering older, it might be dropped as a compulsory subject. We have just increased the age of entry into the Navy by about a year, and the reason given for doing so, as announced in the House of Commons, was that it was desirable to obtain more boys from public schools than heretofore. If that is the reason, however, they will certainly have to advance the age considerably further than that now proposed. Dr. Weldon, the head-master of Harrow, in writing to the *Times* on the 31st January last, says that if the maximum age for the Navy is placed at 15½, possibly more boys than at present will be able to join the Service from the public schools; but, he says, "it is not wise to change a boy's teacher shortly before his examination." He means, I think, that if a boy is going into the Navy, it is not wise to send him to a public school, because, as the average age for going to a public school is fourteen, he would only be there about a year or a year and a half. Then Dr. Weldon goes on to say that "if the maximum age is fixed at 16½, there is no reason why a considerable proportion of the successful candidates should not be public school boys." In that case, however, if we raise the age to 16½, and they remain only one year on board the "Britannia"—which is all we could afford under those circumstances—the young officer could not go up for his final examination before he was 21½, because, I think, none of us would agree in the propriety of an officer going up for his final examination, and being pronounced qualified to take charge of one of Her Majesty's ships at sea, unless he had at least four years' experience in a sea-going ship; especially when we remember how very little modern ships are at sea. I mentioned the word "crammer" just now. I wish it to be understood, as there may be some of these gentlemen present, that I used it in no sense as a term of reproach; I merely use it as we apply the word schoolmaster or professor. We know some of them to be amongst the cleverest men in England, and they have the valuable gift of being able to impart to others what they know themselves; they know also from experience how much they can put into a boy without overdoing the dose. I would remark, however, in conclusion, that if there is one

class of men who will benefit more than another by these new regulations, it is the crammers.

Colonel H. B. ROBERTS (Retired), late R.M.A. :—Perhaps I may be allowed to emphasise some of the remarks made by Major-General Tulloch, and, time pressing, more especially upon those relating to the subject of modern languages ; for I must announce myself as one of those “cramming” gentlemen to whom allusion has just been made. How did I become a “crammer” ? About twenty-five years ago there was a terrible block in promotion, something had to be done, and what was done was this : Suppose my branch of the Service to be represented by this stick ; the middle part of the stick was cut away, and the two extremities were joined together to form a brand new one. I was in the very middle of the stick, and, having some energy still left, I went straightway to Germany with the resolution—as I could not afford to send all my boys to a crammer—of cramming my boys myself in order to train them for their future Woolwich examinations, and my scheme succeeded. I soon found out that, in order not to lose our nationality, it was necessary to take other English boys, enough for the football and cricket (which was to be enjoyed in moderation) and to promote emulation in the general work ; so my borders were expanded, and we grew into a large establishment, which still flourishes at that most beautiful of places, Freiburg, in the Breisgau. I had learned the arts of patience and perseverance in teaching during a professorship of twelve years at the Royal Naval College, and I soon discovered that to become a successful “crammer” the rules were very simple : to keep boys’ heads constantly in the right direction, to pay close attention to their special wants, and not to begrudge any amount of individual attention in every subject of their work. If, as often happened, parents sent their boys very late in the day, who had only a very short time left in which to do almost the whole work of their education, in order to pass their examinations, I have no doubt that some mental food may not have been properly digested ; but this was not our fault. I have had numbers of boys sent to me from great public schools, who had been taught not to bother about the pronunciation of either French or German, and for the reason that the number of marks given for the “colloquial” was only 200 out of a total of 2,000—that is to say, that nine-tenths of the marks were for paper work, and one-tenth only for the capability of making themselves understood. I cannot too strongly endorse what Major-General Tulloch has said upon this point. Boys were told that it would serve their purpose quite well enough to pronounce French and German words as if they were English words ; thus one of them finding himself upon the Continent would pronounce those useful words *manges, changes*, as M-A-N, man, G-E-Z, gez, *manges*, etc., etc. Now, I am very well acquainted with the manner in which these things are managed in the German Army—where I have many good friends ; there the marks proposed are given in proportion to the use the knowledge of a foreign language may be when upon active service ; they have no head-masters to please by the discouragement of proper and intelligible pronunciation. I am aware that it is proposed to raise the number of marks for the “colloquial” up to 300, but that number is far below what it ought to be. I know that examiners knock off about 30 per cent. from the colloquial marks, as they suppose that no English boy in the world can possibly attain to full numbers—so that, practically, the full number of marks now given reaches a bare 150. I remember a boy coming to me from a great public school, whose master wrote to me that I was about to have their finest German scholar, who could speak the language perfectly. When the boy came I asked him how he had got on upon the journey. “Not very well,” he answered. “I came with two ladies in a first-class carriage from Basle—one of them was a very stiff old lady. It was awfully hot, and I thought we should all do better if we had the window open, and I told her so. But she did not understand a single word I said, except one.” “What word was that ?” “Oh, the word was *du*—of course I called her *du* to be polite, you know ; and then she and the other lady pitched into me together, and I thought

they would have run me in, for they both lost their hair awfully." So the first thing this young man did upon reaching German soil was to most grievously insult two ladies—and he a master of the language! Once a boy said to me that he had been taught to consider the learning of French as being mainly useful for the proper understanding of English, and that he had found it a golden rule, when the meaning of a word appeared to be doubtful, always to think of French or Latin words resembling that word. I opened a book lying near. "Well, we will try. Here is *analogy*; what is that?" The boy said he would rather write down his reply, as he could express himself better in writing; and here is the result. "Analogy is a complicated machine, with three corners to catch snakes." It was very easy to follow his thoughts. "A-N-G," I said, "of course that gave you *anguis*, a snake, and A-N-G-L being letters in the word suggest *angle*, and *angle* suggests *triangle*—that is 'three corners'—and the course of reasoning being somewhat involved, gives us *complicated*." "Yes," said he, "that's just how I did it." We tried again, and this time the word *assuage* was hit upon, the answer now being, "To assuage is to sit down and drink some beer." "Well, I don't exactly see where you get the beer from, or why you sit down." Then the French *s'asseoir* suddenly struck me. "Of course that's it," said he; "*assuage*, *s'asseoir*." I am sorry that time forbids me to refer to other branches of the tree of knowledge as cultivated, generally, at our public schools.

T. M. MAGUIRE, M.A., LL.D., Barrister-at-Law :—I should not have troubled the audience with any remarks, had it not been that Major-General Tulloch asked me to say something upon this occasion. I did not get his paper in time, and accordingly my remarks must be not on matters of detail, but on general matters. From a general point of view I quite agree with the gallant lecturer when he deplored the lack of mental training among our upper and middle classes. This is a very serious defect. I do not look at the question merely from a military or naval point of view, or from the point of view of a schoolmaster, or of that peculiar person to whom the gallant officer referred as a "crammer," if such a creature can be found. I look at it from the point of view of the nation at large. It certainly is very deplorable indeed that the vast majority of the *jeunesse dorée* of the upper and middle classes of England, between the ages of seventeen and twenty-five, should be absolutely ignorant of everything that it concerns a gentleman to know. I have not the slightest hesitation in saying that the remarks of the gallant general are justified in this particular. An average schoolboy knows absolutely nothing at the age of sixteen or seventeen. This may seem a very strong statement. I do not like to speak of my personal experience—I prefer generalities. I was amused at some of the remarks of my gallant friend the last speaker, but I can assure you of this: I can tell you the names of some fifty gentlemen belonging to the best classes in England, some of them the sons of distinguished fathers, on all of whose education very large sums of money had been spent, who at the age of nineteen could not write an ordinary letter; could not translate one sentence of any classical author; could not translate one page of a French novel or a paragraph of a German newspaper; could not describe any British campaign; could not follow the course of any leading river; and could not spell any hard word. I put it to the audience, Is that not a danger? And if that sort of thing prevails to any considerable extent, is it not a disgrace, and should not steps be taken to remedy it, whether these young gentlemen are intended to be ordinary men of the world, to be Members of Parliament, members of vestries—not a very lofty situation, but still valuable in its way—or to be naval or military officers, that is to say, leaders of their race in terrible crises? I say that a young English gentleman should have at least two-thirds of the education of a young French or German gentleman of his age. If the people of England are so indifferent to mental culture and training that they will ignore the necessity for a leader of the race obtaining proficiency in ordinary mental culture, the time will come when they will bitterly regret it, and the time will come when less luxurious and less indolent nations will

take their place in Imperial pre-eminence. It is from this point of view I look at this educational question. Now, Sir, what have these gentlemen received to compensate them for not acquiring the necessary rudiments of culture? Can they ride—these young gentlemen of eighteen or nineteen? They cannot. I have had numbers of gentlemen of considerable means taught how to sit a horse; surely a gentleman ought to ride. Can they box? They never learned any boxing. Can they fence? can they sing? what can they do? They can play cricket; they can play football—about up to the average of an ordinary village boy, and certainly not better than an ordinary Scotchman or an ordinary Irishman, with regard to football especially. The gallant general referred to what might occur to these young gentlemen in their future, supposing they did not enter the Army or the Navy. We are obliged frequently to report to parents (and now I must speak from my personal experience). I have had to report in the last two years to forty-five mothers that their sons would get no situation of any kind, in any part of the world, except as hewers of wood or drawers of water; the mothers were not very much pleased, either with the school or with their sons; and, least of all, with myself. I do not think it will do any harm to anyone to know Napoleon's treatment of Spain and Portugal, and the outlines of Wellington's operations in the Peninsula, with all due respect to the gallant general. I should expect most young English gentlemen of sixteen to know as much as French boys do at the age of thirteen or fourteen, or as West Point boys. Certainly, French boys, gentle or simple, would be able to tell you a great deal about Napoleon before they were fourteen. Boys in the *Lycees* certainly would; I can speak from careful study of the course taught in those schools. Take another point. With regard to the value of these young men in the Colonies; how can it be contended that a young gentleman who cannot spell properly, who cannot write properly, who cannot talk properly—because he has not, for lack of reading, the ideas which are at the foundation of conversation—how can it be contended that he is likely to make a good man in the Colonies? *A priori*, I do not suppose he would. He has no energy of character; his mind has been allowed to go fallow without his body being very well developed. Therefore, if he goes to the Colonies, he cannot become either a successful manual labourer or a successful director or manager of any kind of business. Mr. Parkins, the celebrated Canadian, sets forth his views very clearly on this point. He is an orator, who came over here to convince us that Imperial Federation was necessary. He assures us that the very worst possible class of colonials were these unfortunate young men who came from home—I will not mention any particular class of schools—but who, having been in the position of gentlemen, had not the education of gentlemen at the age of nineteen or twenty. I had occasion to ask a medical man of great experience in New Zealand what he thought about the matter, and he said one of his duties constantly was to try to do something for those poor waifs and strays, these young gentry of England; and that a great deal of his time was spent in writing letters home to get people to relieve them in their distressful circumstances, into which the comparatively humble man of other classes did not drift. That, I say again, is a danger to the State. With regard to what has been said about the necessity for learning Latin, I do not object to a classical education. Fortunately, or unfortunately, for myself, I went to the classical side in my early days; but I am quite convinced that, from a business point of view—the point of view of getting on in the world—it would have been very much better for me indeed if I had devoted the years which were spent upon Greek to making myself master of some three or four more modern languages. I say so even from the professional military point of view. There are constantly reviews and articles on most important matters published in foreign military papers. A man who does not know that language has to wait until some man that does translates it. The man who does know the language gains time, and as we have only seventy years to live—and some of us not even that—time is

a very important factor. But an officer will derive an enormous amount of information if he is able to read articles as they are published in these French and German journals. That we, who are coterminous with the Russians, should give a great number of marks for ancient Greek—not modern Greek, which might be of some use to us during the next few days—and no marks for Russian, or Turkish, or Arabic, appears to me to be perfectly preposterous. Culture and modern languages should be encouraged among the better and more scholarly classes of our community. Ten minutes is a very short time to deal with a topic which one would gladly speak upon for hours, the more so that there are so many details of such an interesting character in the address of the gallant general. He refers to a celebrated remark made by the Duke of Wellington, that the battle of Waterloo and the Peninsular war were fought in the playing fields of Eton. If the Duke said that, he was unkind. There were a great many people who fought, there who could not read or write at all, and who fought very well too, hailing from different parts of the United Kingdom. A large proportion of officers entered the Army very young indeed in those days. Some of the Irish officers were gazetted before they were born, and the late Field-Marshal Fitzgerald absolutely was a major at the age of nine. It is impossible that the majority of the officers should have been at English public schools; and, therefore, I think if the Duke had been tempted to make such a remark, he would have apologised for it, and withdrawn it in the interests of the harmony and unity of the United Kingdom. With regard to the curriculum for the Navy and the Army, I think the curriculum at the age of fifteen or eighteen could be easily passed by any ordinary Scotchman or Irishman from any ordinary middle-class school; and I am very sorry that I must say that there is something exceedingly wrong in English education at the present moment; and the sooner it is remedied—I do not care whether the crammer or the schoolmaster, or the soldier or the sailor, be at fault—the better it will be for parents of the rising youth, for the boys themselves, and for the future of our country.

Captain W. H. JAMES (Retired), late R.E. :—I should like to preface my remarks by a correction and a definition. The correction is a statement made by Major-General Tulloch, that all Indian officers formerly went through Addiscombe. I do not know whether there are many old Indian officers present who got what were called "direct cadetships" in those days, but it is, nevertheless, a fact that a very large number of officers passed an examination which took a few hours of one day and then went to India as full-blown cadets and were put into regiments out there. The other is a definition which I offer to Vice-Admiral Bowden-Smith. He talked about cramming. I am one of those never-to-be-sufficiently-deprecated individuals, a crammer; but I have a definition of cramming which I will offer for the consideration of the audience and the gallant admiral: *cramming is the word used by inferior teachers for a method of imparting knowledge to which they are unable to attain themselves.* The main question which Major-General Tulloch has put before us is a very simple one. Reduced to its lowest terms it is this: Who is to settle the system of education by which British officers are to be selected? I am going to speak plainly and boldly on this subject. I say the question which has to be settled is, Are the military authorities to define the system under which the young men in question are to be examined; or is it to be left to a set of people who have nothing whatever to do with the military career? I will point out that, however distinguished the educational professors in this country may be, they have never yet claimed for any other walk in life, that they should dictate exactly the system of education for it. Take the case of the Foreign Office. I do not find that for the Foreign Office a classical education is the one thing aimed at and desired. So far from that being the case, ancient Greek has recently been cut out. Take the question of the Navy, upon which you, Sir, can speak with greater authority than myself, I am not at all prepared to admit that naval officers are ill-educated, but I very much doubt whether there is '01 per

cent. of them who could translate two lines of Horace, and I am sure that there are even fewer who could translate two lines of Greek. We should remember at the present moment that the cry throughout the land is for technical education ; in other words, that early in a boy's school-boy days you should begin to train him for his career in life ; but I am told that for the Army this does not matter in the least—you *must* train him in accordance with the system at present existing at most public schools, and that if that does not suit the Army, so much the worse for the latter. I do not admit the position. If the educational system were one which fell in with the demands of the Army, I should not deny it ; I should be prepared to support it ; but I say it certainly fails in one, and that the most important, subject of every boy's education, viz., the history of his own country.¹ I do not propose to dilate upon this, because Dr. Maguire has already alluded to it ; but I do emphatically say that it is a shame that the average Englishman, when he grows to man's estate, knows nothing about the history of his own country, and nothing whatever of the process by which this gigantic British Empire has been made. Whose fault is this ? It is the fault of those who are charged with the education of our youth in their earliest days. At the present moment there is no big public school in England which makes the instruction of the history of our country one of the main subjects, which it ought to be, of every boy's education, or which even attempts to teach geography. I again take the question of classical education. I should like to draw attention to the enormous difference between the classical system of education in England and that which obtains on the Continent. On the Continent the aim is to enable the youth or the man to be able to read Latin or Greek and to understand it. We do not aim so much at that in England as to turning English into Latin or Greek. I have found by experience in the case of boys who have been educated abroad that for practically reading ancient authors they were better trained than a great many boys who were able to write far better Latin or Greek prose, but who could not take up and read with the same facility a Latin or Greek author as could a boy educated in Germany. But our present system is still more fatal to foreign languages. I hold that foreign languages to the British officer are of the very first moment. First of all, if he does not know foreign languages he is cut off from the literature of foreign naval and military writers. He has to get at them second-hand in translations. A distinguished headmaster for whom I have very great respect pointed out that a certain number of these translations were not always what they might be. I have seen some of them, and I agree entirely with what he said. But what is the reason of that ? The fact of the matter is publishers are enabled to palm off these inferior goods because the standard of judgment is so low owing to the want of knowledge of foreign languages among officers. If it were higher they would read these works in the original, and they would see that half the translations offered to them are worthless and useless. There is a very curious position at the present moment, and with great respect to those military officers who rule the system of education I would draw attention to what has recently been done at Woolwich, and to what is now going to be done at Sandhurst. Formerly at Woolwich the cadet could take up both French and German ; now he can only take up one foreign language. At Sandhurst, I believe, they are going to introduce the study of both French and German. I do not know whether the cadet will be able to take up both or only one, but I say the system which has been introduced—the doing away with the arrangement to take two foreign languages at Woolwich—has been a death blow to instruction in German, and those who are acquainted with the question will back me up in that statement. Not only is that

¹ I have no hostility to public schools. They give an education of association especially to the older ones which no other establishment can afford. My only regret is that the administrative authorities make so little of the advantages they possess and insist upon regarding every boy as being intended to take a classical degree at one of the universities, whereas this only applies to about 5 per cent.

the case, but the alteration which was made some years ago in the subjects of Class I for admission to the Army, by which a candidate was permitted to take three—he might take all—but he could only take three out of Mathematics, Latin, French, and German—the making Latin a compulsory subject has distinctly diminished the number of boys who took up German, and therefore it has distinctly diminished the number of officers who have a knowledge of that language. Now, Sir, when we look back at the pages of history and see what the education of our great soldiers was, it seems to me that there is no more patent absurdity than to put forward that your military baby should be brought up upon Latin and Greek and nothing else. What was Marlborough's knowledge of Latin and Greek? What was Wellington's knowledge of Latin and Greek? I will venture to say this, that Wellington was uncommonly thankful that he was sent to a French Military School, because it aided him so much in his subsequent career; he was able to write French—a trifle like the "French of Stratford-atte-Bow," but, still, he was able to converse fairly well in the language, and was able to write with a certain amount of facility. I am perfectly certain that he would have given a good deal to have been taught German too, and that he would not have valued ancient Greek the least little bit from a practical military point of view. Of course, I know the theory which is always put forward—that Latin is the foundation of the modern romance languages. That is all very fine, and it applies to those who know Latin; but I, unfortunately, have to deal with the average schoolboy, and I say that the average schoolboy's knowledge of Latin is of no philological use whatever. It does not aid him in the least to learn any other subject. I could tell stories by the hundred if I were to illustrate it by example, but I should like to tell you one story in the days when Latin was not a compulsory subject. A young gentleman came to me. He had to translate "a piece of land," and he used for it "*frenum terræ*." Those of you who are classics will appreciate the beauty of the translation.¹ There is only one other point to which I wish to refer, and that is the question of Militia officers. I confess to differing somewhat with Major-General Tulloch. I have consulted a large number of commanding officers, and they all say that the Militia officer has this advantage, that when he joins he knows more of the duties of an officer than does the average Sandhurst cadet. I do not say that one system or another is perfect—there are very few things perfect in this world, and I do not say either the system of passing boys through Sandhurst or the Militia is so; but I do not believe that the Militia officer is in any way inferior to the Sandhurst cadet, and I do not believe that six months after they have been in the Service there is the very least difference between them. If there were this difference, you would find that in after life there was a great difference in the career of those who passed through the Militia. We all know that is not the case; and although it may be said that at one time a considerable proportion of failures in passing the examinations for promotion were found to be with Militia officers, there was a very good reason for that. In those days the literary standard was so ridiculously low, but it was the same in the case of the Queen's cadets who were let into Sandhurst. I know that, as a practical fact, it was well known in the days of the old literary standard for the Queen's cadets there were far more failures to get through Sandhurst in proportion than there were with those who passed the higher competitive examination. If you raise the literary standard then you have insured a certain amount of education, or a certain amount, at any rate, of intellectual capacity, and you put the Militia officer exactly on the same level as the Sandhurst cadet. That has now been done, and I, for one, do not now believe in any real difference between the two. There is another thing we must not forget. In the lecture given by Lord Raglan recently in this theatre, he pointed out the absolute impossibility of officering the Militia if you do not have something of this kind. He advocated quite the other

¹ I know of another young gentleman who had been four years at ———, and who translated "*sui generis*" as of the nature of a pig.

line of conduct; he said that he would put every British officer through the Militia and not through Sandhurst at all. When two such doctors differ with whom are we to agree? You cannot take both medicines. But I think the middle course which obtains at present is the better—that is to say, have both systems; and as to believing one is inferior to the other, I say emphatically the experience of the Army does not show it or give the slightest foundation to the theory that has been put forward by my gallant friend, who seems to have based his lecture on certain premises which suited his own particular views, and to have made deductions from them in accordance with his pre-conceived notions. It does not follow that either are correct.

Colonel R. W. RAINSFORD-HANNAY, R.A. :—To my mind the evil of competitive examinations is the fact that we have of necessity to train our boys for the purpose of passing examinations, rather than developing any special mental faculty. I think no one will deny that the object to be aimed at in the education of our future officers is to train them to be leaders of men. It is manners that make the man, and not the power to pass the examinations. I think most of us will agree that public school life is the very best training a boy can have for this purpose. It is a curious thing that—though there seems to be a general consensus of opinion that public school training is the best a boy can have—the educational department of the Army should do so much to handicap the public schools, and almost oblige the parents, if they wish their sons to pass, to remove them from the schools at the very age when public school life is likely to have its best influence upon them, namely, about the age of fifteen, when they are coming on to be prefects, and to take a lead in the school, whether in its work or in its play. One of the things that handicaps the public schools is the period at which examinations are at present held; they are held at the end of June and November. There is a period of five months, from June to November, and seven months from November to the subsequent June. The examinations come on four or five weeks before the end of the school term. Take the case of a boy who goes up for the June examination. He goes in for his examination and he does not know whether he has passed or failed. He may go back to school, but you can scarcely expect him to go back to regular hard work for the remaining four weeks of the school term, which are, therefore, wasted. Then come the midsummer holidays, and if he has failed and returns to school he begins work in the middle of September, and he has only two months then before the next examinations. It would be an immense benefit to the public schools if the winter examination were made a month or three weeks later so as to finish just before the Christmas holidays. When the Military Education Department carried on its examinations they used to have them at the beginning of July and the beginning of January, and I think it is a great pity that that was ever altered. Then there is the constant change in the subjects of examination, and it is very difficult for public schools to follow those changes. Some few years ago it was languages that paid best, and it is a pity they do not pay best now. So far as the Academy is concerned it does not pay (as Captain James said just now) a cadet to take up two languages. It pays him better to take up physics instead of a second language. Physics for examination purposes, as I am given to understand, is a subject which can be more easily got up than a language. Proficiency in a language is, I consider, more useful for a soldier and a better test of a boy's mental training than a superficial knowledge of physics. I agree with Major-General Tulloch that the study of foreign languages might be removed from the Royal Military Academy curriculum, but I think that the marks gained on entrance, or a proportion of them, should count for the final place when cadets are commissioned. It would always be found that candidates for Woolwich will take up subjects which pay at the R.M.A. in preference to those that do not. I am glad Major-General Tulloch has mentioned the matter of a minimum. I think that is a very good check to superficial knowledge. But the system of

minimum as it is now carried on at the Academy—and I speak of the Academy because I know more about it than Sandhurst—is not only grossly unfair, but it does not serve the purpose for which it is intended. We will say a subject counts 1,000 marks; a cadet has to get one-third before he can count his marks; one cadet may get 333 and count nothing, and another who gets 334 will count the whole 334 marks. Now, you cannot say that the cadet who got 333 is a bit worse than the one who got 334, yet he is 334 marks behind in his total. If a minimum is to be of any use at all we ought to take away all the marks below the minimum and only count those that are above, and then the man who got 334 would only count one mark. I am glad that Major-General Tulloch has said something about book-keeping. I think most of us here have had reason, in the course of our service, to regret that we were not taught to keep accounts better in our youth. With regard to the schoolmasters, I think the fact is that many of them do not care to establish army classes because they object to a system of instruction for the sole purpose of passing a competitive examination. I also think that it is rather unfair to lay the blame of failures at their door. There are something like six candidates for every vacancy, and there must be a very large residuum; and if anybody has to bear the blame I think we parents share it with the schoolmaster. I think we are a great deal too much inclined to imagine that when we send our boys to school we cease to be responsible for their education, or at all events that our responsibility varies in an immense ratio to the amount of the school bill.

Rear-Admiral C. P. FITZGERALD:—I think it will strike everyone who has listened to the lecture, and who has also followed the discussion which has been going on lately about naval education, as somewhat remarkable that a system which is so utterly rotten and so bad in every way, has produced results which are admitted to be not altogether failures. I think the lecturer was good enough to say that the present generation of naval officers were not absolute failures. They manage in some way to keep up the ancient traditions of the Navy, and it is rather a conundrum that such an utterly bad system should produce such a fair result. Supposing our system of education had been good, we should have been too good altogether for this world; no other nation would have had a chance. There is another anomaly I should like to point out in the lecture with regard to public schools. The public schools have been getting it rather hot all round, not only from the professors, but from the lecturer; and it is a pity that there is not some public schoolmaster, or any rate an undermaster, here to defend them. I have no reason to defend them, I know nothing whatever about them; but it is a little odd that Captain Moore, who has been quoted by the lecturer on several occasions, and who is looked upon as one of our highest authorities on the subject, has been largely instrumental in getting the regulations altered with the avowed object of getting boys into the Navy from these establishments where they teach them nothing at all! It is a most remarkable fact, and certainly requires some explanation. If the public schools are so utterly rotten as educational establishments as they are made out to be, how is it we want to get these uneducated boys into the Navy? That is a question which touches on the matter of age. I cannot help thinking the age will be altered back again. You will not get public-school boys into the Navy. As has been very properly pointed out, it is not worth while to send a boy there for a year. You will unsettle his mind, and he would not really be a public-school boy at all. If we are to have unlimited competition, as suggested, how is the ignorant public-school boy to have a ghost of a chance? I hope to see the age altered back again to the younger age. That is my view of it, and I have good reasons for it; and as to unlimited competition, I should be very sorry to see it. I am sorry to say I disagree with Vice-Admiral Bowden-Smith and the lecturer as to the benefit of unlimited competition. I think it would frustrate one object which the lecturer dwelt upon, namely, that it was desirable that the sons of naval officers should get into the Navy on the principle of heredity. I quite agree with him there. With

unlimited competition, the sons of naval officers would probably have as good a chance as anybody else, but they would not have a better chance. There is one technical point about the French with which I do agree with the lecturer very largely, namely, the peculiar way in which it is taught, and the small value placed upon colloquial French. I was asking a schoolboy the other day, who speaks French as well as he does English, and who had come out very low down in the French class—he had just gone to school—what was the cause of his failure. He said, "Oh, they do not teach the same sort of French at school." It was evidently school French, and not talking French. There is only one remark more I wish to make with regard to the general education of youths, for the purpose of passing examinations. I entirely agree with Vice-Admiral Bowden-Smith on that point, that this last movement is playing right into the hands of the crammers. A boy is kept at a preparatory school up to thirteen, and then he will have to go; and where is he going to? They will not keep him at the preparatory school after thirteen, and it is no use sending him to a public school for a year, especially after what we have heard about them, and he will have to go to the crammer; so that they will have it all their own way, and I wish them joy. They have got the game in their hands now, and I believe they will keep it more firmly under the new regulations.

Commander R. G. O. TUPPER, R.N. :—The wind has been somewhat taken out of my sails by the speakers who have preceded me, and, therefore, I am glad to say that I shall not keep you very long. In the first place, I must say that I entirely endorse what has fallen from the lecturer and from several other gentlemen present, who have spoken with regard to the deplorable want of education which is shown by some of the youth of England. A great many people deplore it, but I have heard no one suggest a remedy. I should myself like to hear a remedy suggested, but think it rests solely with parents themselves. The lecturer has twitted naval officers generally with not knowing languages. The reason we do not know languages is that we never have time to study them. Ever since I have been in the Navy I have been hard at work, principally abroad. I did apply for leave to go to the Continent to study languages, but, unfortunately, we have not enough officers to permit lieutenants to go to the Continent to study languages—we want all our officers on active service in the fleet; and until we get a large reserve of officers I do not see how any can be spared to study languages on the Continent, and that is the *only* way to learn a language properly. Unless parents will teach their children languages when they are very young indeed, beginning directly they can speak, by having French, German, or Russian servants, and let them obtain a grounding in that way, their boys will not find many opportunities for acquiring languages after entering the Service. That is the only way I learned the French I know, I spoke nothing but French till I was about six, and a good deal of it has stuck to me. That is a suggestion to parents. With regard to the open competition, I am entirely in accord with what has fallen from Rear-Admiral Fitzgerald, and I humbly beg to differ from Vice-Admiral Bowden-Smith. The First Lord of the Admiralty already possesses power to increase the number who compete for cadetships as much as he likes. Some people say if you have open competition it will upset the boy's mental balance at that early age. Other people say that if we have open competition it will raise the standard, and you will get boys who can pass better examinations. The First Lord of the Admiralty has it in his power now to try both these systems by extending or limiting the competition at will; but if you suddenly open the door and have open competition, you will never be able to close it and go back to limited competition again, however injurious open competition may prove. With regard to the age of entry, I must say I am greatly in favour of the increase of age, to give the boys as thorough a grounding as possible in the subjects that they will have to know in the Service, subjects which will bear upon their professional life, not forgetting naval history. Let them get that grounding before they come into the

Service. My idea is this: When they join the "Britannia" let the education there be as technical as possible for the profession; do away with naval instructors at sea entirely, having naval instructors in the "Britannia" only, and the best professors we can get at Greenwich, and at least a year of study there. If the whole education of midshipmen was left in the hands of the commissioned officers, and we did away with naval instructors altogether, it would be very possible that we should arrive at a better result than we now obtain. With regard to the remarks upon the training squadron, I must say I think the lecturer has put that excellently. The training squadron is most valuable, but lately we have added to the Navy a class of vessels which I think are the most admirable that have ever been produced, not only for fighting but also for training both officers and men in all their duties—I refer to the torpedo-boat destroyers. I humbly suggest that three or four of these should be attached to the "Britannia," and by certain alterations in the accommodation and a small reduction of the complement, I think it will be possible, from what I know of them, to accommodate eight or nine cadets in each. If the cadets were sent to sea in these as they now go to sea in the "Racer," they could always come to anchor at night and they will actually learn there all the qualifications necessary for a seaman such as leadsmen, and helmsmen, correcting their compass, taking their sights and bearings, and doing all the practical part of a seaman's duties. Of course a great deal in this direction is already done in the "Racer." But I really think the destroyers are better than the older-fashioned ships for teaching the young cadets, it puts the newest ideas as to engines and guns into their heads and they are not likely to forget them.

The Rev. B. POLLOCK (Master of Wellington College):—I came here this afternoon with no intention of opening my lips, but simply to learn and to listen. My train is going almost in a moment, and so I must curtail what I have to say. In the first place, I should like to thank the lecturer for his interesting address, and the speakers for the discussion which has been evoked. I am very glad, indeed, to have the opportunity of finding how we schoolmasters are considered to be doing our work in the public mind, and to learn how we may do it more efficiently. Rear-Admiral Fitzgerald has just asked the question: Why, if public schools are such failures in certain respects as they are represented to be, there is an anxiety on the part of the Army and Navy to obtain their officers from these institutions? I think the answer is a very simple and a very short one. In all our discussions this afternoon we have rather been thinking of what Colonel Hannay spoke of as the teaching of boys and young men to pass examinations, or what we generally call mere instruction. But the larger question of education, comprising the education of character, has been greatly omitted. At the great public schools boys are learning immensely important lessons when they are not being instructed in their class-rooms. They learn in their playing fields from one another; the elder boys learn from ruling the smaller ones, and the younger ones from obeying the elder ones. A great public school is a little world of its own, and there boys learn the characteristics that as men they will require in the larger world outside. I should be the very last person to say that our system was perfect, and I hope that nothing that I have said will lead anyone to suppose that we do not accept good-humouredly the criticisms which have been levelled against us. If Dr. Maguire could produce his young man of nineteen who knows nothing, I might from my own experience be able to supplement his class. There is one further point that must be remembered—that one of the advantages of a public school education is that boys, while they are receiving it, are being taught side by side with boys who are going in for many and different professions. If we were asked to start a separate army class, a separate navy class, a separate solicitors class, a separate clergy class, a separate schoolmasters class, and so on, it is quite possible we might be able to give those boys better technical instruction to make them solicitors, or whatever it might be; but, I think, so long as we can keep them

together, and so long as we are able to postpone the day of specialisation, so much the better for the boys in the larger sense of education. Here is no doubt one argument in favour of maintaining the teaching of Latin. It is true there is much to be said against it, and I am by no means anxious to hold a brief on its behalf; but Latin will serve boys who are contemplating a variety of callings and they can all learn it side by side, because in that subject they will remain very much on a level; and Latin, with one or two more subjects, will be equally useful, or equally useless (!) in a great variety of professions. I am grateful to you for listening to my rather disjointed remarks; it was Admiral Fitzgerald's question which brought me to my feet, and I take the opportunity of thanking him for his kind words with regard to schoolmasters.

The CHAIRMAN (Admiral of the Fleet Sir J. E. Commerell) :—Before I ask Major-General Tulloch to reply, I should like to say one or two words. I am afraid I cannot agree with my friend Vice-Admiral Bowden-Smith about the question of competition. I hope I may never see the day when the Navy is thrown open to open competition. I think it would be the greatest mistake in the world. I have spoken myself to many old military officers, and I think Major-General Tulloch has made a mistake when he supposes that it is so greatly approved of in the Army. There are many things required in the Navy beyond $x+y$, and even some of the sciences that are taught. I believe myself that the first thing to do is to teach young fellows to command men. I believe myself that at the present time boys entering at an early age in the first place assimilate a great deal more to the Service. They come in before they have had all those luxuries and freedom which we see at public schools; they come in before they have had the same at home, and the consequence is they take more to the Service. If, on the other hand, you wait until they are sixteen or seventeen years old, I will tell you what will happen. I had a discussion with an American admiral once upon this very question. You may know, perhaps, that in the American Navy the boys enter after having been at the college in Annapolis at the age of eighteen. The admiral said to me, "Half my time is taken up in correcting the faults which are made by these young officers, and by pointing out to them that they are not to treat men like dogs." Now, in the British Navy a boy goes into his jolly-boat, he mixes with his men, he mixes with the old petty officers, and what is the consequence? When he gets to an age really to command, he knows exactly what the idiosyncrasies of the sailor and the marine are; he knows perfectly how to manage them—which he would not do if he entered the Service at a later age. It is getting late now, and therefore I will say nothing more about education; only I will say that I am perfectly certain of one thing, namely, that to bring boys into the Service from public schools at the age of sixteen would be neither one thing nor the other. You would get an underdone schoolboy, you would find that you would upset all that he had learned before, and you would have none of the advantages of the public school education. Therefore, under those circumstances, I think we had much better hark back to where we began, of course remembering that the present extension of age has been rendered necessary by former inadequate entries.

Major-General TULLOCH, in reply, said :—With reference to what Vice-Admiral Bowden-Smith mentioned about Scripture knowledge, I venture to think that if it is considered necessary to have an examination in it for entry to the "Britannia," it ought to be a qualifying one only and not one to cram for marks. After the remarks which have been made by such high naval authorities, I must really beg to be excused from making any criticisms whatever. It was bordering on presumption on my part to mention anything connected with the Navy, but I wish, as I particularly said in my lecture, to point out what a magnificent object-lesson the Navy has been to my own Service, and how we benefitted by it. In former days, we in the Army really were professionally exceedingly ignorant; but wherever we came across one of our old friends in the Navy we at once saw that

he had his profession at his fingers' ends. In a military club, who ever heard of professional subjects being discussed as ordinary matters of conversation? whereas in a naval club professional matters seem to be always under consideration. Having been connected with the Navy on duty on many occasions, and having served as staff officer on a flag-ship to a naval commander-in-chief, I could not help seeing how thoroughly trained naval men were, and always looked forward to the day when we should be the same. I trust I may be pardoned for having brought forward a naval subject, but professionally I could not help making use of that grand Service which has made the British Empire what it is.

THE PROPOSED NAVAL COLLEGE AT DARTMOUTH.

By Commander W. H. LEWIN, R.N.

Thursday, March 11th, 1897.

Admiral Sir R. VESEY HAMILTON, G.C.B., in the Chair.

LECTURE.

I must crave the kind indulgence of my audience to-day. Nature never intended me for a public lecturer. The only excuse I have to offer for coming before you is the keen interest I still take in my old profession, and also that, having had fourteen years' experience as a preparatory schoolmaster, I have gained some knowledge of the feelings of parents, and the requirements of boys.

At the outset, I wish to say that any remarks I may make are not dictated by personal motives. In a preparatory school ten boys are prepared for the public schools to one for the "Britannia," so that it makes very little difference to most preparatory schools whether they give up or retain their Navy classes. If, therefore, I condemn the new rules lately issued as regards the age for entry of cadets, it is not to be taken that I hold a brief for preparatory schoolmasters. Indeed, these new rules may probably be to their interest; for should preparatory schools decide, at the wishes of parents, to retain boys who are in the Navy classes for a year longer, it would be to their gain. One thing is pretty certain, either they will retain these boys up to the age when they are to enter the "Britannia," or they will entirely give up preparing boys for the Navy. No man cares to sow for another to reap.

I never was one of those who cried out for doing away with the "Britannia." I have always considered that a very good, useful education was given there, under somewhat difficult circumstances.

The "Britannia" may not have been perfect, but no human system is faultless. Now, however, that it has been decided to place the educational establishment on shore, I think the time has come for enquiring, What have been the chief failings and short-comings of the "Britannia"?

Undoubtedly, one we have heard a great deal about of late has been the unhealthiness of the ship, and the difficulty of stamping out epidemics.

We have also heard a good deal about bullying and the low moral tone of the cadets. Personally, I do not believe that there has been more bullying on board, or, as a whole, a lower moral tone than exists in other educational establishments where large numbers of boys are assembled. Still, it is a fact which we must recognise, the "*Britannia*" has got a bad name; and the general public have an impression that life on board is very rough, and not exactly such as careful parents desire for their sons. I think this impression has got abroad mainly owing to the circumstances that whenever anything goes wrong on board and it comes to the knowledge of parents, they are at a loss to know to whom to address their complaints. In the case of a public school boy, if a parent is dissatisfied in any way, he communicates with the housemaster, and talks matters over with him. Should a black sheep be discovered at a public school he gets a private hint to withdraw, and there is no scandal; the public know nothing of the affair. The case is quite different as regards the "*Britannia*." People are shy about writing to the captain, and dislike the fuss of an official enquiry into their complaints. Consequently, they write anonymously of their grievances to the newspapers, and the "*Britannia*" gets a bad name. The scheme I am about to propound is aimed at doing away with some of these difficulties.

It may be as well to say at once that I am entirely opposed to the plan of raising the age of entry, and keeping the cadet a shorter time in the "*Britannia*." In these days, when we hear so much on all sides of the necessity of technical education, it is difficult to understand this retrograde movement. I would prefer to see boys entered earlier, and kept longer at the naval school.

The only reason I have ever seen given for raising the age, was that it would attract a better class of boys; that we would possibly get boys from the public schools. Now, when a better class of boy is spoken of, in conjunction with the public schools, we presume, by the latter are meant such schools as Eton, Harrow, Winchester, Charterhouse, Clifton, Marlborough, etc., schools that take first rank in parents' estimation; but had these schools ever wished to prepare boys for the Navy, there is no reason whatever why they should not have done so ere this. Formerly, boys went to public schools, many of them soon after twelve; and had the public schools been willing to pass on boys after they had had them for a year or so, they could have done so. How many boys have entered the Navy from Eton or Harrow? Anyone who knows anything about public school boy life will, I think, bear me out in saying that if a boy gives promise of being a good cricketer or football player, likely to make a name for his school, he will have every inducement held out to him to remain on in the school till he has got into the eleven, and has had the honour of playing at Lord's in some first-class match. Then, should a boy be studious, he is pretty sure to be told he is too good for the Navy; that he should stay and gain a scholarship for his school. The idle and the useless they will have no objection to our taking, but then the standard of the entrance examination must be brought down to their

level; that will be the next step to catch public school boys. Doubtless many schools not now in the front rank will instantly step in and advertise "a Navy class"; but is it worth while making a very doubtful change as regards the good of the Service to benefit a few of these schools?

You cannot begin too young to make a sailor. Youth is the time when the best and most lasting impressions are made, and it is all-important that we should get a race of naval officers who take a pride and pleasure in the Service—men of independence of character not drawn from public school failures.

I know it is frequently argued that the non-combatant officers go to sea much older than midshipmen, and settle down contentedly to the life; but I would remind you that they have a very different time of it on board ship from that of midshipmen: there is no night watch keeping for them; the young Doctor or the young Marine officer has a cabin to retire to when he pleases, and is practically his own master. He rarely comes in contact with the 1st Lieutenant or the Commander. But is it true that these classes settle down so very contentedly? I am inclined to doubt it. I think whenever you hear life on board ship run down, and the hardships of the Service discussed, it will be by the non-combatants, or those very officers who have to suffer least inconvenience on board ship.

It is a rare thing, indeed, or was in my day, to find grumblers amongst the executive officers; yet with them rests all the anxiety and responsibility. When a ship runs aground, or gets into a collision, the paymaster, the doctor, or the marine officer, go scot-free—they are not tried by court-martial. This contented spirit is what we want to encourage; and if we do not catch our officers while young, and bring them up to be used to the hardships (for we know habit is second nature), we shall have nothing but a set of discontented men perpetually growling that they have done quite as much as they are paid for, etc. In the olden time our great sailors went to sea at eleven; it may not be possible to do so now that a very much higher education is required, but it is possible to familiarise their minds from an early age with all the best traditions of the Service.

Another objection to raising the age of entry for cadets is, the very great inconvenience it will cause parents. Boys of fifteen are too old for preparatory schools. To send them to a good public school for one year would be of little or no use as regards public school training and discipline, and it would probably entirely unsettle their minds, so that parents who are anxious to see their sons enter the Navy will not risk the attractions of public school. There will then be no choice left but to send them to a crammer. Now, I have not a word to say against so-called crammers. They do excellent work, and are simply men who have made a study of the educational question, and take care to choose instructors thoroughly capable of imparting the knowledge required in each particular branch. But I do think boys of fourteen are too young to be sent to these establishments, where they will have to associate with young men of from seventeen to twenty-two who are preparing for the Army and the Universities. They will there miss entirely all advantages of anything like public school life.

What then is to be done? I suggest that what we require at Dartmouth is something as near the nature of a public school as possible, always bearing in mind the future profession of the boys; and that we should allow boys to enter this school at the age when they generally leave a preparatory school, viz., about 13½.

In passing, I would say, let us carefully avoid the word "Training" as part of the title for the new school or college. It sounds a harmless enough word to nautical ears, but somehow to the general public it always conveys the idea of crime. Old ladies look with pity upon a man when they hear he has a son in a "training-ship," and whisper gently "For what was he committed?" There is a great deal in a name, and personally, I prefer the good old-fashioned word "School," which Dr. Johnson defines as a "house of discipline and instruction," to my mind just the place we require. We have already got a "College" at Portsmouth and another at Greenwich, so I think we cannot improve on the title "The 'Britannia' School for Naval Cadets."

We will now proceed to consider some of the drawbacks urged against the old "Britannia," and how best to avoid them in the future. The most serious objection, and the one which has been found most difficult to grapple with, has been the unhealthiness of the ship, and the difficulty of stamping out an epidemic once it got in.

Before building a new school, it is very desirable to obtain the advice of men who have had long experience of boarding-houses for boys at some of our modern public schools. It is not sufficient to give an architect orders to draw up a plan of a building to contain a certain number of boys and masters, and then to look at the elevation and outward effect, and vote for the prettiest and cheapest plan. Those who have to live in the house can often give the best of architects very valuable hints. I speak feelingly on this subject, as when about to build a school of my own I very nearly spent a large sum of money unnecessarily, merely to amuse an architect. Fortunately for myself, before finally accepting the plan I resolved to visit several of our public schools, and by that means I got a great deal of very valuable information from various housemasters, the result being that my own house is not quite so highly ornamental as it might have been; but it has proved to be exceptionally healthy, and I am more than satisfied. A grain of experience is worth a pound of theory.

We know that the young are, as it were, hot-beds for the propagation of zymotic diseases, and once infection gets into a large barrack-like building, it will be found just as difficult to stamp it out, as it has been on board the "Britannia." For this reason, if for no other, it is very desirable that the separate house system should be adopted.

Each house should stand well apart in, say, 20 acres of ground, and be capable of containing one term cadets; with a sufficient staff of masters and servants, so that should an outbreak of any infectious ailment take place it need not spread, and could be stamped out without in any way interfering with the work of the other houses. It is most disorganising to the whole routine and course of study to have to break up in

the middle of a term to disinfect; and yet this is what ought to be done if an epidemic is raging in a building where a number of the young are massed together. But, in addition to epidemics, we have all the various illnesses incidental to growing boys and the carelessness of youth—illnesses which, though trivial at first, may become very serious if not taken in time. It must always be exceedingly difficult to detect these illnesses in an early stage amongst a large number of boys; there is more chance of a boy's state of health being observed when amongst the few than the many. Whenever a boy complains of feeling out of sorts, he should at once be moved out of the dormitories to the private part of the house, and kept under the observation of the doctor and matron; should there be any suspicion of infection, he would, of course, be moved to the sick-house for infectious diseases. But cases of colds and small accidents, requiring attention and good diet, had better be nursed in the house under the matron. Under the separate house system much greater attention could be paid to diet—not that there is anything to complain of in the scale of diet as laid down in the "Britannia" regulations; but amongst so many it is impossible to look after the wants of the few. It would be a great consolation to parents if they knew that it was possible under some circumstances to make some slight alterations in diet. Take the case of a boy lately recovered from some illness. His private physician prescribes food a little oftener and of a lighter character until he is more robust; but the boy protests he cannot follow these instructions unless he goes on the sick list; yet he is well enough to work, so he does not wish to lose time by going on the list. This is a small concession that could very easily be arranged with any housemaster. It may be said that this means "coddling" boys and is unnecessary, as we require robust men, not invalids, in the Service. Quite so, and it is because we require strong men that we must see we take care of their constitutions when young and at the growing age.

But it is not merely on the score of health (important as that is) that the separate house system is advocated, but for the wholesome spirit of rivalry which it engenders. Competition amongst houses, as to which will turn out the greatest number of midshipmen, or those who will gain "time" in passing out, which will have the smartest boat's crew, or carry off the rifle corps prize, to say nothing of being cock house for cricket or football, competition of this kind is what makes the training of a public school life so valuable for boys. Yet it is this very training which the cadets of the future, if the new regulations are adhered to, will be entirely deprived of; for we know that a boy who has an examination perpetually looming in front of him will not be able to join in any games. First at his preparatory school the unfortunate boy will go through a system of cram to gain admittance to the public school, then once there the examination for entrance to the "Britannia" is staring him in the face. No captain of an eleven will have anything to say to him, even could he spare the time from work to go in for matches, for he is only to be in the school for a year, and can bring it no renown. Then, when he joins the "Britannia," the same desperate grind will go on as now takes place at Greenwich,

where a wretched sub-lieutenant is expected to get up in three months' time as many subjects as require at least nine months, if they are to remain in his head and be of the slightest use to him in after life. A sub-lieutenant now, if he is anxious to procure his two stars, is unable to allow himself the necessary time for the exercise essential to health; and many miss their two stars quite as much because they break down from nervous depression as from want of ability.

What we should aim at is, to get boys as young as possible. Give them a good sound education as nearly approaching that of a public school (as is compatible with their future profession as possible), and carefully avoid all cramming. After keeping them for three or even four years at Dartmouth, require them to pass such an examination as is now required of sub-lieutenants at Greenwich in mathematics and scholastic subjects, but in addition allow them to take up two voluntary subjects. These voluntary subjects should each carry with them an equal value in marks, so that a cadet may be induced to take up the subject for which he feels he has most aptitude—not merely the one which pays best in marks. Modern languages should be encouraged, so ought drawing and map work. Some boys of a literary turn of mind might be allowed to take classics as a voluntary subject. They need be none the less good mathematicians for doing so, as we know it is possible for a man to be both a classical and mathematical scholar. Naval officers are apt to decry a classical education as useless; but may not this be much as if a blind man were to say he did not consider the gift of sight necessary to mankind, because he, the blind man, managed very well to get about without it? A classical education tends to enlarge the mind, and though it is by no means necessary for a naval officer, it cannot harm him. We know that during the Mutiny officers shut up in Lucknow were able to communicate with those outside by means of secret messages written in the Greek characters. One can never tell when knowledge may not come in useful. But it must not be thought that I wish to advocate a purely classical education, or in any way to sacrifice a good modern education. All I would have is, that those young officers of exceptional ability, and who have the liking for the subject, might be afforded the opportunity of taking up classics, but keeping these strictly to the voluntary list of subjects.¹

I may be asked, How is all this to be carried out, and what will be the expense? The latter is a most important point, and it is very necessary that the school should be self-supporting; there must be no inducement to a Government in want of a cry of economy to cut down the education of our naval officers. Let it be clearly understood by the country that

¹ Since this paper was read, the new regulations regarding the subjects in which naval cadets of the future are to be examined have been published. I regret to find that Latin is awarded 800 marks, whereas to French and German respectively only 400 is allotted. The result will be that all boys, whether they have a taste for classics or not, will be crammed in Latin, as it is the best paying subject on the list, though it is to be dropped when the cadet joins the "Britannia."

the cadets pay for what they receive. I have constantly seen it stated that the present "Britannia" costs a large sum over and above what is paid by cadets. This should not be. British parents, as a rule, have no wish to come upon the taxpayers for the cost of their sons' education. It is impossible to keep a boy at Eton, Harrow, or Winchester for less than £200 a year; or at Clifton, Charterhouse, or Wellington for under £150, if he is in the Army class, and it will be the same in the Navy class, as boys preparing for a competitive examination require "extra tuition." Why then should a cheaper education be given in the "Britannia" than at other schools? At Woolwich and Sandhurst the fees to the general public amount to £150 per annum. But as it is a well-known fact that the sons of officers make the best officers, and as it is worth while to secure these, who are not as a rule rich men, a reduction should be made in their favour, and the present scale of £75 per annum should remain in force for all who have claims on the Services. In considering these claims great latitude might be allowed, so as not to shut out any promising candidate on the score of expense. A grandfather in the Service, or proof that an uncle has well served his Queen and country, might be taken into consideration; but all who are willing and able to pay the full price for their sons' education should be allowed to do so. It may then be considered that we shall have two-thirds of the cadets paying at the lower rate, and only about one-third paying the higher scale. But before discussing the cost of the maintenance and education of the cadets, I would like to say a few words as to the cost of the separate houses. If we have one big building it will be necessary to have a handsome erection costing a large sum of money, for we would not popularise the Navy by setting up a hideous factory-like block on the beautiful site of Dartmouth. Every man in Devon, and every yachtsman who frequents the harbour, would cry shame on us if we did. To build one large college would, I suppose, cost at the very least £100,000, but to build four or five houses would not cost more than £60,000. I calculate that a house to contain 75 cadets, with 20 acres of land, would come to £15,000, or a smaller house to contain 60 cadets could be built for £12,000; and one other great advantage of the separate house plan would be, that should it ever be found necessary to largely increase our Navy, another house could quickly be built; whereas, to alter one large building so as to take in an increased number is always a most difficult thing to do. Let each house be called after some well-known naval hero, not forgetting the worthies of Devon; the dormitories arranged as like the flat of a sea-going ship as possible, cadets to sleep in hammocks, and have sea-chests for their kits.

Having said so much about the buildings, I must hurry on to consider the internal economy of the school.

The first requisite is a Head Master or President. We should certainly choose a naval officer for the post, but he must be a retired officer, for no school could succeed where the head is constantly being changed. The longer a man has to do with boys, the more he finds that he has himself something fresh to learn daily. What is required of the president

or head is a man of tact. No teaching duties should be required of him, as he must devote his whole time to general supervision. He should be a good organiser, and capable of handling men and boys judiciously. Having found such a man, he should be given a very free hand, in fact allowed as much freedom as any headmaster of one of our great public schools, which are nominally controlled by a governing body, but are in reality entirely dependent for their success on their headmaster.

A course of study could be drawn up by the advisers of the Admiralty at Greenwich, but the carrying out of details should be left to the president. The only control the Admiralty need undertake would be the half-yearly examinations, when the general efficiency of the school would be tested. To the president should be allowed the choice of house-masters and assistant masters, particularly the latter, for on them will greatly depend the moral tone of the school. These assistant masters should be young men who have themselves had a public school education, and taken degrees either at the London or one of our older Universities. They should be athletes, as it is very necessary if they are to win the confidence and respect of the boys that they should join heartily in all games. In fact, they should be such young men as all our best public and private educational establishments take care to select. If the president has the power to change these masters at his discretion he will take care to keep none who do not have a good influence over the boys.

One other advantage of allowing the head to select his staff will be that, as circumstances change, he can as he finds it expedient take off a master here and put on one there. At one time the greater number of cadets may elect to take up German, and the assistance of extra teachers of that language be required; at another, more cadets may want to learn drawing, and so on.

After the cadets have spent three years in the school, or reached the age of sixteen, if they can then pass such an examination as is now required of a sub-lieutenant at Greenwich, they should for the future be excused all scholastic work, and go direct into a training squadron to learn their profession. Then after a certain number of years at sea, on joining Greenwich they can devote all their time there to purely professional subjects.

I have not touched upon the training of the cadets in seamanship while at school, for it seems needless to observe, after what I have already stated, that it is intended they should have constant practice in handling boats; and it also appears to me that it would be most desirable to have a modern ship stationed at Dartmouth, on board of which they should be sent to learn their way about, and get instruction in signalling and various professional matters. The cost of this ship, however, should not be debited to the educational account of the cadets. We must have a number of reserve ships in commission, and in no way can they be more usefully employed than in affording the young naval officer of the future opportunities for learning something of his profession. Cadets too would

be taken out for cruises in the "Racer," and be sent round occasionally on whole holidays to visit Devonport Dockyard.

Everything that is possible should be done to foster a liking for, and pride in, the Service. A sailor can no more be made in a day than a cricket or football player. Who ever heard of a 'Varsity man representing Oxford or Cambridge at Lord's who had only taken to cricket a year previously? Yet nowadays there appears to be an idea abroad that if we catch young men of sixteen, and keep them for one year at Dartmouth, they will turn out useful sailors at the age of seventeen! I fancy most naval officers will say it takes from three to four years to make a useful officer. And if we begin their training so late in life, what becomes of the prospect of having young lieutenants and early promotion?

Turning now to the question of expense, and assuming that we require 300 cadets, 200 of whom are received at the old rate, or £75 per annum, and 100 at the, say, increased rate of £125, we get a sum of £27,500. From this a sum of £75 per annum per cadet should be handed to the school for maintenance and education, which will absorb a sum of £22,500, leaving a balance in the hands of the Admiralty of £5,000. From this balance the Admiralty should pay the salary of the president and that of two chaplain instructors and two naval instructors, who would act as directors of study—say, £2,000 in all (in addition to their naval pay), which will still leave a larger balance than is required for keeping up the gymnasium, play-ground, games fund, etc., so that a grant of £320 for eight scholarships of the annual value of £40 can be given, to be competed for by the sons of naval officers, due regard being paid to the pecuniary circumstances of each cadet.

RECEIPTS.		EXPENDITURE.	
200 Cadets paying £75		Education and maintenance of 300 Cadets at	
each -	£15,000	£75 each -	£22,500
100 Cadets paying £125	12,500	President and Naval In-	
		structors -	2,000
		Eight scholarships -	320
		Balance -	2,680
	<hr/> £27,500		<hr/> £27,500

Out of the £22,500 handed over to the school, the president would have to provide the entire domestic staff, as well as an efficient staff of assistant masters. He would also be responsible for the catering. All this can be far more effectual, and economically managed if left to him. One thing, however, should be insisted on, and that is, that resident and junior masters should mess with the cadets, not only as a means of preserving order, but as a certain guarantee that the food supplied will be good, ample, and well cooked. Were this rule of masters having their meals with the boys carried out in our public schools, we should hear less complaints concerning diet.

I must apologise if I have, perhaps, detained you rather too long over mere details of economy, but I was anxious to demonstrate that it is possible to have something like a public school

for the Navy without having to go annually to Parliament for money.

To sum up briefly. What are the advantages claimed for this scheme?

First.—Perhaps we ought to give the first place to the fact that it is intended to be a self-supporting school, and that if the scheme were carried out the country would be saved the £24,726 now annually spent on the “Britannia” over and above what the cadets pay.

Secondly.—That the cadets will have a good all-round education, under conditions as nearly as possible approaching those of a public school; while at the same time keeping in touch with the Navy, and being brought up to take a pride and interest in the Service. Also, that they will be ensured at least three years’ continuous study, without being constantly harassed by having to pass something like a competitive examination annually.

Under these circumstances, we may look for a more liberal education and a better *esprit de corps*, consequently a higher moral tone amongst the cadets.

Thirdly.—That the system could be tested partially at first, and, if found successful, could be carried out in its entirety.

A house to hold seventy-five cadets could be got ready in six months, and that number of cadets under fourteen admitted, which would greatly relieve the congested state of the “Britannia.” At the end of three years, on these cadets going to sea, commanding officers should be asked to report on them; and if it were found that the consensus of opinion was in favour of the early entered, then let us revert to that system, and build houses accordingly.

The Admiralty must always put the good of the Service before every other consideration, and, their object being to get the best officer, surely it is worth while to try both systems side by side! Let one batch of seventy-five cadets be taken in under fourteen, keep them at school at Dartmouth for three years, whilst others are taken in older and passed out of the “Britannia” in one year; then compare results!

Rear-Admiral A. H. MARKHAM:—I rise, Sir, in obedience to your call; but I must candidly confess that I had not the slightest intention when I came here of taking part in the discussion. I cannot say that I am altogether in accord with the lecturer in regard to the system he advises for future naval education. I have not, however, given the matter that serious and careful consideration which its importance deserves, and therefore I do not feel quite at liberty to express any hastily-formed opinions upon it. The lecturer has said that the “Britannia” has a bad name: this is the first time I have heard that such is the case. Perhaps my ignorance on this point is due to the fact that during the forty years I have been in the Service I have spent the greater part of that time abroad, and have consequently not seen the periodical growls and complaints appearing in the public Press from the relatives, parents, and friends of those serving in the “Britannia.” I do not think that the “Britannia” has a bad name, and I sincerely hope she has not. I rather take exception to the desire expressed by the lecturer to substitute the name “School” for “Training” in reference to our naval educational establishments. I had the privilege and honour of commanding the Training Squadron for a period of three years, and I remember I rejoiced in the name. It was essentially a *Training Squadron*. I shall be very sorry if the name “School” is substituted

for the word "Training" in any of our educational establishments. I do not think that "School Ship" or "Scholastic Squadron" is better than "Training Ship" or "Training Squadron." The word "Training" does not, to my mind, convey any idea of its being connected with a reformatory or criminal establishment. The lecturer has spoken about having separate houses. I dare say such a system would be a very good arrangement, so far as sanitation is concerned; but I have yet to learn that the percentage of sickness in our naval or military barracks, or in any of our large establishments, is greater than in our public schools, where they have separate houses. With regard to making the parents pay more for their sons while on board the "Britannia," I do not think that the English taxpayer, if he wants a good Navy, will growl at having to pay liberally for the education of its officers.

Vice-Admiral Sir NATHANIEL BOWDEN-SMITH, K.C.B.:—The lecture which has just been delivered deals with the proposed new Naval College at Dartmouth, and goes into the details of the structure. I am not acquainted with the site which the Admiralty propose to acquire, or with the quantity of land they propose to purchase; so I will merely say that Dartmouth being a picturesque and lovely spot, we must all hope the Government will erect a college there worthy of the place and its beautiful surroundings. There is, doubtless, a great deal to be said in favour of separate buildings, each housing a certain number of cadets. It is what is done at most of our public schools, as we are all aware; but as I am very desirous that this should be a Naval College, under naval discipline, and with a naval officer at its head, it seems to me that some sort of central building or college is absolutely necessary. The lecturer, I notice, hopes that we shall have a naval officer at the head of the establishment; but he says he should be on the retired list, in order to ensure continuity of management. Now, I think the officer at the head of the proposed establishment ought to be on the active list, and that he should be changed every three years, in order to keep the college in touch with the Service afloat. I myself believe there are very few appointments in the Navy that ought to be held for more than three years; I am a great advocate for a new broom. The lecturer recommends that the boys should be kept at this establishment for three years; but I think two years ample, and I would let the clever boys pass out in eighteen months. With regard to boys who are going into the Navy, I think it is quite necessary, or at all events advisable, that they should go to some place to get a technical education before they go on board a ship; but until they do go to that place, I would much prefer their remaining in the ordinary schools where they have been previously educated. We do not want naval officers to be brought up in one groove. In the Navy we have room for officers with every qualification and every sort of accomplishment; and the more these are varied the better for the Service and the better for the country. Now, as regards the building and arrangements proposed for the new college, I think it would be well if those who are going to carry out the work went down and looked at our establishments at Woolwich and Sandhurst, with a view to picking up a wrinkle. For instance, at the present moment at Sandhurst there are about 350 cadets, and those cadets are divided into six companies: not by term—as in the "Britannia"—but there are a certain number of each term in every company. Perhaps it is owing to the method of keeping the terms separate, as we do in the "Britannia," that we hear about the bad feeling between the different terms, and so-called bullying. The lecturer has gone into the cost of the establishment. I think that the new establishment ought certainly to be self-supporting, with the exception of the first cost of the land and building, and also the maintenance of the tender or cruiser to be attached for educational purposes. The officers and men of this cruiser would be available for sea-service, just as the officers and men of the "Britannia" are now available for sea-service; and I do not think it is fair to charge the wages and maintenance of the officers and men to the school. I take exception to the lecturer's statement "that the present 'Britannia' costs the

country about £25,000 a year over and above the contributions by the parents of the cadets." I am quite aware that you can take the Navy Estimates, and interpret them so as to make the "Britannia" cost anything you like. I cannot say that I have studied those Estimates very recently, but, to my mind, the cost to the country of the present "Britannia" is more like £5,000 than £25,000. The lecturer says that the boys should have their sea-chests in this new school, and also that they should sleep in hammocks. I have no objection to the first proposition, but I certainly would not allow the boys to sleep in hammocks. It is true that we all did so when we were young. I do not know that we are any the worse for it, but we might have been much finer men if we had not slept in hammocks during our youth. At all events, in my opinion a growing boy has more chance of growing up with a good straight back if he lies down on a flat surface at night than if he lies for six or seven years of his life coiled up, as it were, in a hammock, with his feet and his head higher than his "midship section." Now, as regards the general question of the entry and training of naval cadets. I have hitherto been in favour of the early entry of naval cadets, because, as I have said before, the sailor's life being an unnatural one and subject to severe discipline and much restraint, I am afraid that the boys would get tired of the Service after they grow up, or would become discontented; indeed, I agree with the lecturer when he says that discontent, if any, is more apparent amongst officers who have joined the Service as men than amongst those who have come in as boys. If it is now intended by increase of age at entry to induce boys to join the Service from our public schools, I think the Admiralty will have to extend the age considerably more than that now proposed; and even then I fear it will only lead to disappointment. Would any one here, having a boy, send him to a public school for a year or eighteen months? If he wanted to ruin his prospects he would, for that is all the time they would have at present under the new regulations. The late Admiral Ryder proposed a scheme whereby the nominations should be distributed amongst the public schools for competition; but there is very grave objection to this plan. In the first place, many parents who have boys well suited for the Navy have not the means to send them to so-called public schools; or they prefer to have them at private schools, or bring them up at some educational establishment on the Continent. Without wishing to speak disparagingly of public schools, we know there are many boys who would learn more at the smaller schools. In large public schools idle boys, and boys without any great ambition, are not made to work, and consequently they learn little or nothing. When any change is about to be made in our entrance examination into the public services, I am always sorry to hear the authorities express any preference for any particular educational establishment. Let the Government by all means make their regulations for entrance examination into the public services; let them alter and amend those regulations when they see necessary; but I should say, let them leave the choice of schools to parents and guardians. Now, as regards competition for entrance, I prefer open competition to the limited competition which we have at present for the Navy. Time does not permit me to go into the reason on this occasion. As to liking competition, I do not suppose any of us really like it; but as education increases, and as the number of those who want berths increase, we cannot see our way out of it. The late Archbishop of York, better known as Bishop Magee of Peterborough, when he was distributing the prizes at a school at Leicester more than twenty years ago, made the following remarks on competition. He says:—"I am very much afraid we are riding the competition hobby too fast and too far, and that some day it will slip down and give us a very ugly fall. I am very desirous that the prizes of this life should be within the means of the very humblest members of the community, but the competition system is placing it out of their reach, for competition means cramming, and cramming means money to pay the crammer. I am convinced that as the prizes of life grow larger and

competition grows keener, and as the questions put year by year grow harder and harder, so the pay of the crammer will get larger; and the consequence is that the prizes of life, instead of being for the younger sons of the great amongst us, will be for the younger sons of the rich." He goes on to say that "Competition between the examiner and the crammer reminds him of the competition between those who make armour plates and those who make guns, only," he says, "the worst of it is, we are not throwing about insensate metal, but the hearts and brains of young men and boys." Then the bishop goes on to say that he wishes the Government would establish a colony in some beautiful out-of-the-way place like Fiji, where those men might go who never passed a competitive examination, or never tried to pass one; but said he, "It would be such a quiet, peaceful, happy place, that the clever ones would be shamming dull to get into it." Although none of us can see our way out of competition, it has occurred to some people that to this brain competition (if I may call it so) there might possibly be added competition in gymnastics and physical exercises, so that boys of powerful physique and strong in limb might have some chance in competing with those boys without strong limbs, but with great brain power. In making this suggestion, I do not mean to say for a moment that the clever boys are always weak and puny, and the dull boys always tall and strong of limb. I remember when I was captain of the "Britannia," one of our very best boys in the school was a leading boy in every way; he was as good in the cricket field as he was at school work. That, however, is not always the case. We must all know boys and young men at the present time struggling to enter the Army—fine young men apparently, with plenty of courage and good limbs, and yet who have no chance in a competitive examination of the ordinary kind. I admit it would be a very difficult matter to arrange the details and award the marks, but I think the difficulties might be overcome with the aid of a good gymnasium.

Major A. D. SETON, R.A. :—I have not had the honour of serving in Her Majesty's Navy, but I should like to say a few words on this paper from a parent's point of view, as I have one boy a candidate for the next examination, and I have two others coming on who will probably go into the same Service. I only wish to refer to one matter mentioned in the paper, and that is with regard to raising the age of cadets, and so on. Speaking as a parent, I am dead against this raising of the age for naval cadets. As I understand it, it is about two to one against any individual boy passing the examination. There are about three candidates for every vacancy. I want to know what is to be done with the failures if the age is raised? We cannot all expect our boys to pass, though we all hope that they will. We cannot get over the fact that it is competition, and the odds are against any individual. Of course, the same thing applies when a boy goes up to Sandhurst or Woolwich; but then he is a great deal older, and he has probably had more time to make up his mind about the matter. The present suggestion of raising the age is neither one thing nor the other. The boy is neither very young nor very old, and the naval course of preparation is not the same as that for the Army. If a boy goes up for the Navy and fails, to a great extent his time will have been wasted, so far as preparing for other competitions is concerned. There are certain subjects that do not apply in competing for Sandhurst, for instance. Notably, in Latin, he will be very much handicapped. It seems to me that if the age is raised, the boy will be much worse off under the new scheme if he tries for Sandhurst after he fails for the Navy. A great many boys develop late. Some youngsters of thirteen and fourteen are by no means well developed mentally at that age, and probably our lecturer can confirm what I say upon that point. I think most people engaged in instruction hold that opinion—at least they have said so to me. With regard to boys of fourteen going to ordinary so-called crammers, I may say that I sent my boy first of all to a mixed crammer—an instructor who takes boys for Sandhurst, etc., as well as for the Navy. It is certainly a great disadvantage to a boy of that age to go to a place which is not

school, and has not the discipline and restrictions that a school has. He is put amongst young men, and they are not under the same restrictions that they would be at school. I think a boy of thirteen or fourteen requires more looking after and more discipline than he does when he is older—at any rate he ought to have it; and at these places where older boys are they do not get that close personal supervision. They are left to go about by themselves a great deal more than is quite wise in towns. Most of these places are in towns, and it is not at all desirable that the boys should do so. As I understand it, the idea of raising the age of the entrance of naval cadets is to give the public schools a chance. Speaking as a parent, I should never dream of sending my boys to public schools on the off-chance of their passing from the Naval classes there. As long as there is competition you must have special preparation; and, although public schools profess to have Army classes and all that sort of thing—and, no doubt, they will have Naval classes—I should like to know what the percentage of boys is from public schools who pass, as compared with the percentage of failures of boys who have gone either into Sandhurst or into Woolwich direct from private tutors. I do not think it is anything like the same proportion. I know a great many parents who have put their boys into these so-called special classes at public schools, but who have removed them as the preparation was unsatisfactory. Unless the boys are exceptionally brilliant they really have no chance of passing direct at all from these special classes. The public schools lay themselves out ostensibly for it, but as a matter of fact the boys do not get that special attention which is absolutely necessary in order to enable them to pass examinations which are so difficult. The boys must have close personal attention, and they must be little short of geniuses if they pass without it. Unless the boy be exceptionally brilliant he is very much handicapped. I do not wish to say anything about the division of the new college into buildings, but I think it sounds very nice and practicable; but whether a Government establishment could be worked on those lines is another matter, and one I should not like to give any opinion about. If it were a private establishment, I think there is no doubt that that would be the way to do it; but Government establishments and private establishments are not quite on the same footing.

Rev. C. W. HUNT:—I have come as a preparatory schoolmaster, as distinct from a crammer, and I should just like to represent our case, if I may, for a few minutes. There is an Association of Preparatory Schoolmasters, and I was asked by the committee of that association to come here to-day. As far as I remember, Mr. Goschen said in his speech relating to the training of cadets that the Navy was not getting quite the class of boys it wanted, and he put that down to the fact that they were all coming from crammers; and his idea was, as has been stated before during the discussion, that if the age could be raised, public school boys could be obtained to recruit the "Britannia." We preparatory schoolmasters think that all he has done is to defeat his own object in this case; he appears to us to have entirely cut out the preparatory schools, and, at the same time, we do not believe that a single boy will ever go to a public school who proposes to go into the Navy. Of course, a preparatory school is a school preparing boys for public schools, and we cannot keep boys over fourteen. The system of discipline suitable for a child of nine becomes intolerable directly a boy passes the age of fourteen: he would become a nuisance to us, and the school would become a nuisance to him, and therefore it is always advisable that boys or fourteen should pass on. Up to the present time the preparatory schools have been doing very fairly in the Navy examination. I do not say my statistics are absolutely correct, but I believe that the percentage of boys at the last June examination passing into the Navy from preparatory schools, apart from crammers, was about 40. The percentage had been for some time on the increase: the preparatory schools were gradually passing boys much better than they had done before. Of course, that is now all knocked on the head. Our

Naval classes, which were a sort of miniature modern side in preparatory schools, will all have to be given up. We might, under certain circumstances, keep these Naval classes, but we should not reap the benefit; and, as we are all human, we cannot certainly expect to keep them up to the same standard as before if we are not going to have the pleasure and credit of passing our boys on to the "Britannia." Then you have the case from the public school point of view. What man with a good house in a public school would ever dream of taking a boy who is only going to stay there a year? The housemaster wants to keep up the credit of his house; he wants to secure and train boys so that, when they get to be sixteen or seventeen, they will do good to his house and keep up its tone. He will not care to have a boy who is only going to stay for a year. Then, again, a boy passing on from a preparatory school, where the discipline is necessarily rather severe, into a public school, finds everything pleasant and delightful; he meets all his old friends, and has a good time for the first year, with no examination immediately in view. But, on the other hand, the poor boy who is aspiring to the "Britannia" has to work his eyes out in readiness for the examination, with new masters and new books, and then it is very doubtful whether he will pass in. What will be the result? The boy would write home to his father and say, "I think I would rather not go into the Navy. It is very nice here; there is a good prospect of my getting into the cricket eleven, or into the football fifteen; and I think, after all, I will give up a naval career." The consequence will be, you will not get public school boys into the Navy. The result of the scheme is that, instead of defeating the crammers, you are putting the whole of the work into their hands. It may be said, "Why cannot you do it as well as the crammers?" Well, there are reasons. The crammers are splendid teachers—probably better teachers than we are for this special examination. They have studied all the arts and tricks of the papers, and public examinations can be studied in that way by some men. Another great point is, they do not give their boys regular games. Of course, if you work a boy for four hours in the morning, and then put him to a good game of football in the afternoon, he is rather limp, and he will not do much for the rest of the day. On the other hand, a crammer cares nothing for games. He works his boys all day long, and it is quite possible, by keeping on at that for six or nine months, to pass a boy in. What the after result is—well, you may ask the captain of the "Britannia," and other captains, and they will tell you that boys from the crammers do not do as well as boys who come from a preparatory school. I do not suppose we can do any good now, but I do wish to enter a protest against the raising of the age. We do not imagine that crammers should be abolished—they can never be abolished; they are the result of the competitive system, and as long as you have that competitive system you will have crammers, and you cannot possibly stop it. All we do ask is, in preparing boys for the Navy, that we may stand on the same footing, that we may have a bit of a chance. But instead of that, these new regulations have cut us all out—preparatory and public schools alike—and the places on the "Britannia" list will, in future, be divided amongst a few well-known crammers.

Vice-Admiral P. H. COLOMB:—I do not know that my ideas on this subject are of very much use, because, as far as I understand, I go altogether beyond the lecturer and beyond most other people. The question of finance has been mentioned in the paper. We are spending 22 millions on the Navy, and I do not think we ought to boggle about paying any price to get the very best men to command it which it is possible to secure. I do not think that the question of expense ought ever to stand in the way of the entry and education of the naval officer. There are certain things which I believe we are all agreed upon. We are all agreed that it would be better as far as the practical work goes on board ship, as the lecturer has pointed out, that the officers should come in very young. I think he is quite right in saying that. Although there are cases where men have gone to sea comparatively old, and succeeded admirably, the rule is that if you do not go

to sea young you do not get properly used to it—you do not get to the bottom of it. The next point is, we say we cannot now bring boys to sea young, because the claims of modern education are such that going to sea young prevents the officers from taking their places in the world as they ought to do, and would do if they had been trained in the usual way in which Englishmen are trained and taught. Some say "Well, you must not send them to sea so early," that is to say, that the one thing which you want most is made to give way to another thing that you want perhaps less. Then you take the boys and you are gradually increasing the age before you put them under sea training at all. The result is that they ultimately go to sea considerably older than they used to do, and it is proposed now to increase that age still more. Still it is asserted they are not educated generally or technically, and you hope to educate them by having one naval instructor on board the ship to which they go. He is supposed to give them the general and particular education which they want while they are in the middle of doing ordinary officers' work, and are interrupted in a thousand ways by the exigencies of service. Those incompatibilities you are trying to squeeze into the system, and I do not believe it is ever possible to squeeze them in. There is only one thing you have never done properly which gives you everything that you want. If you are content to spend sufficient money upon it there is no reason why the modern war-ship, specially fitted, should not also be a first-rate school. There is no reason that I know of, except the cost, why you should not have a squadron of at least four training-ships into which the boys come quite young—at twelve years of age, perhaps. I will say that not more than 80 of them in each ship with a thoroughly good and large staff of teachers, making in fact four distinct schools afloat, where the boys get used to the sea young, and where, because of the excellent and full staff of teachers, they will get a first-rate general and particular education, as good an education as it is possible to give in any college on shore. Then you have also this, that as they grow older they are trained in the ways of men-of-war. They get a certain amount of boat work, a certain amount of command of men, a certain familiarity with their duties, and I think that at the age of eighteen, after six years' teaching and training, you may send them as sub-lieutenants into regular men-of-war generally, and technically educated up to the highest standard, and at the same time instinctively familiar with all their duties afloat. I do not think that there is really any objection to that scheme except the expense. It would be horribly expensive, there is no question about that. No doubt we have had training-ships before, and we have all admitted them to be failures. Have we ever had the kind of training-ship that I am thinking of? Have we ever had a group of them? Have we ever had training-ships with a fully equipped staff of teachers? Have we ever had a small enough number of cadets on board any one ship to allow of their being properly instructed both in their work as school-boys, and in the work which they ultimately will have to do as officers? I say we have not. And I finish up as I began by saying that I do not think we ought to spare money in the slightest degree, and I cannot see why if you spend money enough upon the system that I am putting forward you should not solve the whole difficulty without any question whatever arising.

Commander W. H. LEWIN, in reply, said:—With regard to Vice-Admiral Colomb's remarks, I think his idea of a school at sea an excellent one if it could be carried out in its entirety. Since I left the Service I have heard many remarks as to the necessity of increasing the standard of scientific knowledge necessary for naval men—particularly in mathematics as required at Greenwich—and I have also heard very much of the interruptions to studies caused on board ship and of the impossibility of midshipmen being able to pursue their mathematical studies with anything like continuity, which necessitates such a tremendous grind, not to say an absolute cram, when they come to Greenwich to pass the standard required there. So that what I aim at is, that by entering them a little earlier and by keeping them a little longer on shore, you could raise them at once to the standard of

mathematical knowledge which is requisite to pass the examination at Greenwich and have done with scholastic subjects. This is done in the case of officers of the engineers and artillery. After they once pass out of the R.A. Academy they have done with their scholastic subjects to a very great extent, and so I think it should be with regard to naval men. I have not looked at the papers very lately, and I am speaking from memory, but about a year ago I compared the standard of the papers of a youngster passing out of the "Britannia" with what he would be expected to do at Greenwich, and there really was not much difference. The standard of French was almost the same; the standard of mathematics was certainly a little higher at Greenwich; but nothing more than a boy with continuous steady study on shore would be able to get up in the additional year's time. With regard to the remarks of Major Seton, I may offer him a little consolation with regard to the failures for the Navy, because I know of two cases of boys who failed for the Navy and who have since passed into Sandhurst very easily.

Major SETON :—That was under the system of entering them young for the "Britannia."

Commander LEWIN :—Yes.

Major SETON :—That is all right; but what I complained of was the raising of the age.

Commander LEWIN :—I did not quite catch your point.

Major SETON :—The raising of the age spoils the boy's chance.

Commander LEWIN :—I have always considered that the subjects in which a boy was prepared for his naval examination were the most useful subjects possible for a general all-round education. Because, since Latin has been so universally taken up (formerly it was a voluntary subject and only taken up by about a third) it encourages and gives a chance to those who are really good classical scholars. I know one boy particularly who, when there used to be a choice of subjects, owed his passing into the "Britannia" entirely to his classical knowledge. He got nearly full marks for his Latin, which got him in about half way up the list. He has always thoroughly enjoyed his knowledge of classics, as they have always been exceedingly useful. Now, of course, Latin is almost universally taken up, and I think it tends to enlarge the minds of the boys exceedingly. I was very glad to hear the remarks Vice-Admiral Bowden-Smith made as regards the cost of the "Britannia." My authority for the figures which I gave was Whitaker's Almanack. As he said, you may turn figures into anything you like. With regard to the remarks he made, taking exception to my choosing a retired officer for the President, I should like to say that I quite sympathise with what he said about officers being in touch with the Service; but there is a very wide difference between a captain commanding a man-of-war and a man being called upon to discharge the duties of the head of an educational establishment. It was only with a view of trying to keep the training college in touch with the Navy that I suggested a naval head at all.¹ With regard to the remarks made by Rear-Admiral Markham as to sickness, he said that there was not more sickness on board the "Britannia" than in barracks. I think that was hardly a fair comparison, because, of course, in barracks the men are older. Boys are always more liable to disease than older men. I seldom heard of a term in the "Britannia" where they had not an epidemic of some kind going on, and yet it is a wonderfully healthy spot. Rear-Admiral Markham took exception to my wishing to avoid the word "Training" in connection with the school. There was a very funny story, I think it was in the "*Britannia Magazine*" itself, in which that very idea came out.

¹My critics appear to have lost sight of the fact that I advocated having a modern ship at Dartmouth, commanded, of course, by a man on the active list. The scholastic part of the establishment I consider would certainly be the better for having a permanent head.

A lady went on board, and after being shown all round and enjoying it very much indeed, she asked the gentleman who conducted her, "And for what were all these poor boys convicted?" I think it was only a few days ago, in the papers, it appeared that the officers on the "Caledonia" training-ship, in the River Forth, were very much annoyed because their boys, who had nothing whatever to do with crime, had been completely tabooed and shunned because of the word "Training" ship connected with them. With regard to the remarks made by Rear Admiral Markham as to the "Britannia" not having a bad name, I was exceedingly loth and sorry to say that it had. I was not aware of it myself when I retired from the Service some years ago; but since I have been on shore and have moved more in scholastic circles and have come into contact with University men and with my brother schoolmasters, I have frequently heard remarks and comparisons made very invidious to the moral tone of the "Britannia," and as to the bullying going on there. It may be quite within the memory of several here that there were two or three exposures two or three years ago which got into the papers. I do not think there was anything very much in them myself, but the papers got hold of it and the general public were frightened by the smoke of the little fire that occurred. Certainly it did give a handle for giving the "Britannia" a bad name, which I am thankful to say I believe is now passing away. Perhaps it was rather a strong word to use, to say the "Britannia" has a bad name now; but she had one a few years ago in certain circles, though I did my best to controvert it.

THE CHAIRMAN (Sir Vesey Hamilton):—Ladies and Gentlemen, it is now my duty to conclude the discussion. With regard to the remarks made by Major Seton as to what to do with our failures, I have read the Report of General Sir Frederick Carrington, published in yesterday's *Times* from the *London Gazette*, on conspicuous gallantry in the field of the forces putting down the insurrection in Matabeleland; he mentions "Captain" Lewellyn, Buluwayo Field Force (late Royal Navy), July 20th, "during a rush on Beresford's force in the attack on . . . Captain Lewellyn ran to the Maxim, which was for the moment without a firer, and remained alone at it, keeping it in action, with the enemy within a few yards; and displayed great coolness in working his Maxims under fire at the attack on Babayan's stronghold on other occasions." I remember also he was highly spoken of for handling the Maxim in the war which terminated Lobengula's reign at Buluwayo. Now, Captain Lewellyn was a naval officer. He came to Greenwich when I was there, and he failed at the two regulation examinations; but in consideration of his previous conduct afloat, and having been rather out of the way of naval instructors, he was allowed the exceptional privilege of a third one. Unfortunately, however, for the Navy—for I think you will all allow, after what I have just read to you, that it lost a very valuable naval officer—simply because he had not a mathematical head, he failed for the Navy. In other respects he was all that could be desired. He went out to Rhodesia, where he highly distinguished himself. Now, I myself am one of those who are perfectly satisfied with the present system. I consider that the young naval officers of the present day are not only unsurpassed by those of any other Navy, but they are unsurpassed by the young officers of our own Navy of former days. I dare say you all remember the wreck of the "Utopia" at Gibraltar, which ran across the bows of one of our men-of-war, and was sunk. The unfortunate part of it was that about 400 or 500 lives were lost. A heavy sea was on at the time, and a strong breeze. All the boats of the squadron went to their assistance, and the commander-in-chief reports:—"Mr. P—, midshipman, showed great coolness in handling his boat, and succeeded in saving fifteen lives under circumstances which might have tried the nerve and ability of a more experienced officer. . . . Mr. W—, naval cadet, considering his age and short period of service, behaved with the greatest coolness and pluck throughout the night." There is an instance in naval life which many of you may be aware of. A few years ago Lord Charles Beresford con-

tributed materially in getting off a French man-of-war ashore on the coast of Syria. There was some good hard work about it. The commander of the ship writes, "Our mids worked famously—lads of 16½, only a year and a half out of the 'Britannia'—proving most self-reliant and capable. I was glad to be able to tell them afterwards how well I thought they had borne the strain put on them, and that Commander King-Hall also said that he had never seen boats better handled; the lads were so pleased." I think everybody here ought also to be well pleased. A few years ago there was a great naval demonstration at New York, in which our fleet took part. This is what an American newspaper wrote of our youngsters, "The English middies are caught young, and the first thing they learn is to command men and to assume responsibility. The American cadet, by the time he gets a boat, is a young collegian well advanced in his studies, but he has not washed his face in salt water like the British fellow of his age, who by that time is quite an old and experienced tar." I think, after all this, ladies and gentlemen, you will agree with me that we have no fault to find with the late system. Whether the present system is better or not, I do not presume to say. Vice-Admiral Bedford, who is a past captain of the "Britannia," is one of the Lords of the Admiralty, and I do not think the matter could be left in better hands than it now is. I am glad that Commander Lewin has explained what he meant with regard to the bad name of the "Britannia." About four or five years ago I was Second Sea Lord of the Admiralty, and the "Britannia" came under my supervision. Reports were made of bullying, but I am glad to say we found that many were ill-founded. With regard to what Commander Lewin says about his brother schoolmasters thinking that the tone of the "Britannia" is very bad, I do not like to put an imputation upon anybody; but I wonder whether jealousy has anything to do with the matter, because, judging from experience, my humble opinion is that there is no better training for youngsters in the world than on the "Britannia." Mr. Hunt certainly made some very strong points, and very good ones too. I think we shall all agree upon that. It has been my opinion for a great many years that the Naval Service owes very much more to the zeal and the energy of the officers afloat than it does to the wisdom of our rulers. In saying that I am going against myself, for I was five years one of those rulers. As long as the energy and zeal of the naval officers exist, which are inculcated in them from their early youth upwards, from generation to generation, although we might have duffers at the Admiralty, the Service would still go on. But if you put the duffers at sea, and the cleverest men in the Admiralty, the Service would go to the dogs very fast. There is no part of my naval career I take so much pride in as being one of those in the past generation who helped to train up the rising generation to, I do not say perfection—because that has never been attained yet—but to that zeal and energy, and readiness to do any work that falls to them. Benin, for instance, was purely a naval affair, but there was quite as much done there as during the recent march to Coomasie, and there was a little more fighting. As long as that zeal and energy afloat prevail, so long will our Navy be the best in the world. A foreign admiral visited me at Greenwich when I was president of the College, and asked me, "What do you endeavour to make of your youngsters?" I replied, "We want to make a great many Nelsons, and a few Newtons; but although we do not want all our naval officers to be Newtons, we must have a few." A remark has been made with regard to the five one-ers; they may be Newtons, but are not always Nelsons. My experience at Greenwich is that every man that got five one-ers was a good all-round man in addition. There was one officer there—I will not mention his name—who got the highest number of marks obtained for many years. He was a capital football player and cricketer, a good dancer; and I must say, talking of dancing, I think it is a very important part of a boy's education. American officers beat us hollow in dancing. They are taught it in their academy, and I think it is one of the things that we ought to be taught as well. It is the only advantage I know of, having spent some time

in quarantine when a mid, as there I learnt dancing with my brother middies. I agree entirely with Vice-Admiral Bowden-Smith that naval officers who have already served their time, and have done their duty and have brought up the rising generation to do theirs, should leave the training of the future naval officers to those who will have to employ them. It is for the benefit of the public service that the naval officer should be in touch with the Service, and one of the great comforts of the present day is—and I think it has tended very much to the present efficiency of the Navy—that for a great many years now we have had no political admirals at the Admiralty. Our Lords of the Admiralty for the past twenty-five years have always been men in touch with the Service. Certainly, from three to five years is the utmost that any naval officer should hold a shore appointment; after that he should, as the American paper said, "Wash his face in salt water." I myself am a very great advocate for open competition for entry to the Navy. Some here may have read the memoirs of Lord Clarence Paget, who was for six years Secretary to the Admiralty under a Liberal Government. He points out in those memoirs the tremendous patronage there is in the hands of the First Lord, and says he shudders to think what the effect would be if the political parties were evenly balanced, and the whole of the patronage of the Service became political as it was forty or fifty years ago. There was aristocratic jobbery in those days, but as we advance to democracy there will probably be more so when we have a Democratic Government and, therefore, I advocate open competition on the ground alone that it removes the risks of political jobbery from the hands of our rulers. The Americans are obliged to have open competition; and what is more, they are obliged to promote by seniority, for the reason that they do not dare to trust their politicians. At the present moment I am happy to say we can trust ours. Another objection which I have heard to-day is this, that boys at that age are too young for open competition. Now for every appointment in the Navy there are three candidates. This is limited competition. Do you mean to tell me that those boys' brains would be more exercised if there were thirty came up for each vacancy? I say No; and you would have a better pick. When I was at Greenwich we were enabled to trace the careers of all the failures. Beginning at the "Britannia" they passed out badly. They passed badly in all the intermediate examinations right through; they had not got in them a mathematical head. We cannot improve upon the five one-ers, as they are called. But if we had open competition we would have a far better tail, and therefore a higher average. I am sure you will all agree with me that Captain Lewin deserves our warmest thanks for bringing this subject before us, and for the able manner in which he has dealt with it.

TWO OPERATIONS IN WOODS, 1866 AND 1870.

Compiled by Colonel LONSDALE HALE, late R.E.

OPERATIONS within woods form a tactical subject which much exercises the military mind. These operations are of two kinds, sometimes quite distinct from each other, sometimes combined. The one is the moving through the woods, the other is the fighting in the woods. The varieties of woods are so great that no rigid rule for the conduct of operations in them and applicable to all alike can be laid down. Woods vary in size, shape, and extent, and also in the character of the boundaries, which are in some cases clearly defined, whilst in others the wood shades away gradually into open country. The ground on which they stand varies in its topographical features as much as does ground outside them, hilly or flat, dry or swampy. The size, character, and distance apart of the trees, the presence or absence and the nature of the undergrowth vary not only in different woods, but in the same wood. Finally, as a rule, the characteristics of any particular wood are not known beforehand to the troops operating in it. The principles which should govern tactical practice can be ascertained only by a careful examination and comparison of the tactical facts of actual war. As a contribution to the records of these facts, is given in the following pages an account of the conduct of one and the same regiment operating in two woods precisely similar in character. The wording of the narratives has closely followed that of the Regimental History drawn up by Captain von Stuckrad.

* The regiment is the German First Magdeburg Infantry Regiment No. 26. The scene of operations in the first instance is the Wood of Maslowed, or the Swip Wald, at Königgrätz, 3rd July, 1866; that of the second is the Bois de Givodeau, near Beaumont, 30th August, 1870. In the former, the operations included both moving through the wood and fighting in the wood; in the latter, the operation was that only of moving through the wood practically unopposed.

On both occasions the regiment consisted of three battalions, denominated 1st, 2nd, and Fusilier, and probably 900 strong. Each battalion was composed of four companies, numbered consecutively through the regiment from 1 to 12. Each company was divided into three zugs, of which one was designated the "schützen" zug (shooting or skirmishing zug). The operations in the Swip Wald will be the first

described, but before dealing with them a few remarks on the constitution of the regiment seem desirable. As regards the men, the Regimental History does not give information as to the number of reservists called up to bring the regiment to war strength, but, probably, this number was considerable.

When the Army was mobilised the regimental commander had been appointed to the command of an infantry brigade, and was succeeded by Lieut.-Colonel von Medem, from one of the regiments of the Guards. Major Paucke, the commander of the 1st Battalion, had been for nine years in the regiment; Major von Gilsa, the commander of the 2nd Battalion, had been the whole of his service of twenty-seven years in the regiment, as also had Major von Schönholtz, of the Fusilier Battalion. As regards the twelve company leaders, the regiment was fortunate in having to send only one captain away on other duty; and one being retired, the places of these officers were taken by the two senior subalterns of the regiment. Further, of the twelve company leaders nearly all had been in the regiment from the time of entering the Service. With each company were besides four officers, or else individuals appointed as "doing officer's duty." These comprised seven regular¹ first lieutenants, two first lieutenants from the Landwehr; sixteen regular second lieutenants, eight second lieutenants from the Landwehr, six *Portepeefähnrich* (a grade between cadet and officer); one regular vice-sergeant-major, and eight vice-sergeant-majors from the Landwehr, so that of the sixty company officers only thirty-five were its officers in peace-time. The regimental adjutant was a regular first lieutenant; the three battalion adjutants were regular second lieutenants.

THE FIGHT IN THE WOOD OF MASLOWED, JULY, 3rd, 1866. (Plan I.)

The 26th Regiment formed with the 66th Regiment the 13th Infantry Brigade, commanded by Major-General von Schwarzhoff; the 13th and the 14th Infantry Brigades constituted the 7th Infantry Division under the command of Lieut.-General von Fransecky. At half-past twelve on the night 2nd-3rd July, the regiment commenced its march to Cerekwitz from Horitz, and between 8 and 9 a.m. the division advanced through Benatek against the Maslowed Wood which lies some 6-700 paces south of this village.

The Wood of Maslowed, or the Swip Wald, was not marked on the maps, so that at the outset no one knew anything about its size or what the interior was like. It is irregular in shape, and it measures some 2,000 paces from east to west, and 1,000 paces from north to south. It covers the crest and both slopes of a ridge running from Maslowed to the Bistritz. The ridge culminates at two points of almost the same height, the western lying nearly in the centre of the wood, whilst the eastern is only partially covered with growth. From the latter runs out away to the west along the south of the wood a deep valley which separates the ridge from another, on the south slope of which is the village of Cistowes.

¹ By "regular" is here meant an officer on the peace active list of the Standing Army.—L. A. H.

The Maslowed ridge falls steeply on the north side to the Benatek meadows.

The wood is divided into several sections by the road from Benatek to Cistowes, by one leading westward from Maslowed, and also by a glade extending from north-east to south-west. The wood lying to the west of this glade consisted of high timber trees, mostly fir and oak, both with and without underwood. East of the glade are young copses, bushes, and oak nursery plantations; only the particular patches which lie in a north-easterly direction outside the wood itself consist of timber. In the wood close to the east of the glade were many stacks of cut wood. They were often only a few paces apart, and they offered the same obstacles to progress as did in other places the thick undergrowth and the steep slopes. The edge of the wood on the south and east sides was in no way clearly defined. Many rows of fruit trees were on the ground in front leading to the open country, and these impeded the effective fire from the wood. Finally, it may be mentioned, that in front of the north-east re-entering angle of the wood, at a distance of 300 paces, there was a height which seriously interfered with the view in the direction of Horenowes.

It is necessary to bear in mind, as regards the fighting, that the Prussians carried the needle-gun, the Austrians the muzzle-loader. Of the four regiments forming the division, the 27th, and the Fusilier Battalion of the 67th, were the advanced guard, the 66th and 26th were the main body, the 1st and 2nd Battalions of the 67th were the reserve. The advance from Benatek against the north side of the wood commenced about half-past eight o'clock. This part of the wood was occupied by detachments of the Austrian Brigades, Brandenstein of the 4th, and Appiano of the 3rd Corps. They did not, however, offer any resistance, but fell back, for the most part, in the direction of Cistowes. The northernmost parcel of wood, protruding towards Benatek, was held by the Austrians in force. The Fusilier Battalions of the 27th and 67th had been leading the advanced guard on Benatek. The Fusiliers of the 27th were now directed against the western portion of the wood, and the other two battalions of the regiment followed them. The Fusiliers of the 67th went against the projecting north-east angle, thus disposing of the advanced guard, and they were speedily supported from the main body by the 1st and Fusilier Battalions of the 66th. Owing to the ex-centric advance of the 27th to the west, and of the Fusiliers 67th to the east, the centre of the wood remained in the hands of the Austrians. The advance of the two battalions of the 66th did not close the gap between the Fusiliers 67th, and the 27th Regiment; the Austrians held not only a part of the south edge, but also different points in the interior of the wood, so that, now and then, isolated detachments which had been cut off appeared as a surprise on the flanks and in rear of the Prussian companies and zugs engaged in the fight. Some 96 Austrian guns from the directions of Maslowed, Chlum, and Lipa, concentrated their fire on the wood. It was into the gap in the fighting line, the centre of the wood, that about 9 o'clock the 26th Regiment moved forward. Owing

to the order of march in which the three battalions of the regiment stood in the column, the attack was led by the Fusiliers. This battalion advanced in three lines, an extended zug of each of the 10th and 12th companies as skirmishers, followed by the two zugs of each of these companies in close order, with the 9th and 11th Companies in third line. The advance was exposed to rifle fire from the edge of the wood, and to the artillery fire already mentioned; one shell falling in the 6th Company killed five men and wounded seven; eight were knocked over by the bursting of one shell in the 8th Company. The staff-officers and adjutants remained mounted; the captains went on foot. The ground was very rough and torn by the shells, and was so heavy, owing to the rain, that it tore the boots off the feet of many of the men. A fusilier of the 10th Company went through the fight bare-foot. The two musketeer battalions (1st and 2nd) followed in the formation known as "*Kolonne nach der Mitte*" (column on the centre), with colours flying and drums beaten. This formation is that of a close column of four companies each in company column, two such columns deep, and two wide.

From the point (a) was directed on the advancing Prussians a lively rifle fire. The strength of the enemy being unknown, the shooting-line was reinforced by a second zug from each company, the four zugs being led by Captain von Boltenstern of the 12th Company; but it was not until this line had come to 200 paces from the wood that it opened fire on the enemy. The hostile fire seeming to lessen, the commander of the 12th Company ordered the assault; the enemy, who was in small force only, did not await the bayonet attack, but at once retired in the direction of Maslowed, followed by the two Prussian companies, which now, in consequence of the close character of the wood, called up their remaining zugs into the shooting-line. The Austrians retired very gradually, fronting from time to time at points favourable for defence; and, consequently, personal hand-to-hand encounters ensued. The eastern edge facing Maslowed was, however, gained, whence fire was at once opened on the enemy posted beyond; a very energetic counter-stroke by two hostile battalions in column failed before the defensive power of the needle-gun. The other two companies of the battalion, 9th and 11th, under the battalion commander, had followed the leading companies into and through the wood. There ensued now in the fight a short pause, which the major utilised to arrange the defence of the edge. The schützen zugs of the 9th, 11th, and 12th Companies occupied the edge, the two other zugs of the companies being in support; the 10th Company was collected, and was stationed as a second line in rear of the right.

The major-general commanding the brigade had already lost his staff officer, whose place was now taken by the regimental adjutant of the 26th. To fill the vacancy thus created, the regimental commander took the adjutant of the Fusilier Battalion, so the commander of this battalion was without a staff officer during the remainder of the operations.

Following the Fusiliers, the 2nd Battalion, in column on the centre, had gained the northern edge of the wood, not, however, without loss. The brigade commander, who was with it, hearing the heavy firing of the

10th and 12th Companies to the left front, and believing the enemy to be in force in that direction, ordered the battalion, still in column, to wheel to the left towards Maslowed. Although, in the thick bushes and undergrowth, the advance of so large a body in close order met with great difficulties, and halts were frequently necessary to restore order in all the zugs, Major von Gilsa, the battalion commander, considered that so long as an advance in this manner was possible, he must abstain from a deployment into company columns. When the battalion arrived at the further edge on the right of the Fusilier Battalion the two leading zugs were at once extended, and the deployment into one line took place, a gap between the battalions being filled by the schützen zug of the 8th Company. On the right of the line Captain von Ploetz had, with some of the 5th Company, occupied an angle (*c*) salient towards the south-east, so that a portion of his shooters fronted east towards Maslowed and another portion south towards Lipa, whilst the support stood some hundred paces in rear.

The 1st Battalion was the last to enter the wood, and did so at the re-entering angle. The formation was in two lines of half-battalions. It first passed over on the Maslowed road, a strong abattis, behind which numerous dead Austrians showed the tenacity of the previous defence at that point. The further advance into the wood was here as difficult as had been that of the other battalions. The obstacles to progress consisted of thick undergrowth, through which, here and there, a path had to be cut with billhooks; steep slopes with slippery surfaces, here and there big branches, or even whole trees, which had been cut down by the artillery fire. Delay in advance was but insignificant, however, for, with all the strength of lungs and muscles, everyone pressed forward. No one remained behind, all pushed onwards towards the enemy, and with exemplary rapidity order was restored in the companies and the zugs when it had been lost through the difficulties of the ground or the shells falling among the men. The 1st Company, which was on the right of the second half-battalion, had, unlike the three others, not passed over the abattis, but had passed round it to the west, and thus became the advanced guard of the battalion. Its commander, Captain von Westernhagen II., had, at first, extended under Lieutenants von Schierstedt and von Sanden, only one-and-a-half zugs, which went forward in the general direction of the south through the thick undergrowth; but when they arrived in the vicinity of the high knoll in the middle of the wood, they were received by a heavy fire in flank, which was the more unexpected because they knew that the 27th Regiment, which was on their right, had mastered the south edge of the wood, and, therefore, they had not anticipated coming upon hostile detachments so far in rear of the first line.

Lieutenant von Schierstedt, who was on the right of the line, immediately made the men nearest to him wheel round towards this unexpected attack, and open rapid firing, though only the heads of the Austrians were visible. Protected by this fire, the whole line wheeled to the right, and from the still closed half of the company the captain sent the

zug of First Lieutenant Schulenburg direct against the enemy's position. The commander, by a bugler, communicated to the zug leaders his intention to make a concentric attack without delay, so that the whole line tolerably simultaneously, with "March, March, Hurrah!" advanced against the knoll. This was held by some 200 infantry and rifles of Appiano's and Brandenstein's brigades; in disorder, and apparently acting not under any one command, they were in no condition to repel the attack, but they retired in a south-westerly direction, where they were, for the most part, taken prisoners by the closed detachments of the 27th Regiment.

South-east of the knoll, the Austrians held strongly a saddle, covered with low, but very close brushwood. The 2nd and 4th Companies were led against the enemy by the battalion commander, who had hitherto remained mounted, and whose horse was here shot under him. The enemy belonged to the 12th Regiment in the first line of Brandenstein's Brigade, which had repeatedly endeavoured to drive the Prussian advanced guard out of the wood, and which, at places, had been able to penetrate into the interior of the wood, owing to the further edge not being simultaneously occupied by the Prussians. After a short fire-fight the 2nd and 4th Companies advanced to the attack, and a stubbornly contested hand-to-hand fight ensued, resulting in forcing back the Austrians, and in the capture of a large number of them. The 3rd Company had followed the 1st to the knoll, on which the Austrian guns were pouring a hot shell-fire, Captain von Westernhagen being put *hors de combat*.

The 2nd and 4th now advanced to the southern edge of the wood, the 3rd following as second line by order of the battalion commander, who directed the 1st Company to remain at the knoll. The 1st Battalion now occupied the southern edge of the wood (*bb*) to the right of the 2nd Battalion. It was now 9.30 when the regiment had gained the further edge. Now will be depicted the situation in which the regiment found itself.

As already mentioned, nearly 100 guns had for some time been playing from Maslowed and Chlum on the wood; and here and there fresh batteries came into action. As at Münchengrätz, the Austrians had carefully prepared the battle-field: on the tree tops were fastened crosses and other marks, which, not visible in the interior of the wood, could be so clearly discerned from the artillery position that hardly a shot fell short. Shells, shrapnel, and rockets followed each other in unbroken succession, at so short intervals, that it was difficult to detect single shots, and rather it seemed as if the enemy were endeavouring to drive out the 7th Division by a series of salvoes of artillery. It was, in the fullest sense of the words, an iron shower with which the Austrians sought to overwhelm the wood—a hell-fire, whose annihilating power was heightened by the splinters, boughs, and branches which the shells tore off and were hurled about. Large trees were broken like stalks of straw, and they crushed, in falling, men who had sought shelter behind them; and the yard-long logs in the numerous stacks of wood whirled about in the air like children's little wands. The detonations of the bursting shells, the hissing of the rockets, and the whistling of the bullets, with the crashing of the splintered wood,

combined to form a hellish noise, in which the loudest command was audible only in the immediate neighbourhood, and any lower tone of voice was of no avail. The incessant rain kept the smoke of the powder low, and, at times, the smoke remained as a dense cloud before the fire-line, and was as inconvenient to friends as to foes. It was frequently difficult, where in the wood the foliage was thick, to see beyond a distance of twenty paces; only with the greatest care could, therefore, connection between the different units be maintained, or, when lost, regained; among the high timber the darkness, among the low timber the more or less impenetrability of the undergrowth, hindered keeping the true direction, and even patrols could hardly succeed in getting from one company to another.

The view towards the enemy's side was, at the wood edge, very limited, so that after the higher leaders, generals, and regimental commanders had once issued orders for their battalions, it was almost impossible to regulate further action. The same state of things existed with the battalion and company commanders, who, only in rare cases, could work their whole commands for a single object; only here and there could the zug commanders keep in hand the fire of their collected groups.

The, so to speak, dissolving character of wood fighting had even already made its influence felt, so that a real leading of the fighting ceased, and all leaders, high and low alike, were compelled to influence by their personal conduct the men in their immediate vicinity; whilst the men, out of sight or hearing of their leaders, were thrown on their own resources. The individual training of the soldier here bore its fruit; discipline and devotion to duty gained the highest triumphs; and here, also, was shown that the victory over the Austrians was not due to the needle-gun alone, but, in the first place, to the excellence of the soldiers who carried it. The losses in officers had already been heavy; in the 1st Battalion two officers and one Portepfeeführer, in the 2nd one, and in the Fusilier Battalion six, including the Battalion Commander whose place was taken by Captain von Boltenstern. The desire for fighting was so keen among the men, that during the advance many of them had taken possession of the ammunition on their wounded comrades.

The Fusilier and 2nd Battalions had been engaged in a fire-fight at the eastern edge facing Maslowed, driving back vigorous and brave attacks by their fire, reserved in some cases until the Austrians had approached to within a hundred paces distance. The supports, as well as the shooting-line, of the Prussians suffered heavily from the hostile artillery; the 5th Company, the right of the 2nd Battalion, losing nearly thirty men in the first quarter of an hour; other companies suffered not less.

As an illustration of the coolness of even the non-commissioned officers may be given the conduct of Sergeant Schaeffer, in collecting the support of the 5th Company. "Here am I standing in front, and no bullet has hit me," he said to the men, who after the burst of a shell had

not immediately taken their places in the centre of the foremost zug. "Attention; right dress; number; advance arms"; and quietly, as if no enemy were to be seen far and wide, he went to the captain and reported, "The company is formed."

In connection with the fight at this part of the wood it may be mentioned that a certain private of the 8th Company, Gotthardt by name, the sole man of a group of shooters, not *hors de combat*, was opposed at short range by six Austrian Jägers, four of whom he disposed of by a single shot at each; and as the two survivors held their ground he went forward and bayoneted one, the sixth taking to his heels. In reply to a question by an officer who has been watching him as to his success, "Only pretty good, Herr Lieutenant," he replied; "Four hits and a bull's-eye" (*vier Figuren und ein Centrum*).

Emboldened by the repulse already mentioned of the Austrians towards Maslowed, the shooting-line of the 9th, 11th, and 12th Companies had, without any previous concert, burst almost simultaneously from the edge of the wood, determined to follow up their success; the supports followed, and by order of Captain von Boltensern who, as already mentioned, had succeeded the wounded battalion commander in the command, the 10th Company followed in second line. In the face of the overwhelming fire which the battalion had to encounter, the attack could not possibly succeed, and in the retirement to the edge of the wood, the losses exceeded those suffered in the advance. Meantime, detachments of the 66th Regiment had reached the edge of the wood and received the Fusiliers, the supports of which now halted, fronted, extended, and entered the shooting-line of the 66th; the shooting-line became one in which men of different regiments and companies were mixed up; tactical units ceased to exist, and the officers collected together those men who were nearest to them, and within sound of their voices. From Maslowed the Austrians followed close on the heels of the retiring Prussians; owing to the very heavy rain at this moment, the advance at some points was not seen in time; moreover the Prussians could not open fire until all their comrades were back again in the wood. The entry into the wood by the Austrians could not therefore be prevented, and it was only after a hand-to-hand combat that they were driven out, and the edge of the wood regained. Three officers and nearly 100 men was the cost of this premature but daring attempt to profit by the original defeat of the attacking Austrians. But the fight did not end here, for to receive the Austrians driven out, there advanced from Maslowed a Jäger Battalion. Major von Gilsa of the 2nd Battalion observing this, ordered Lieutenant von Bismarck to move out the support of the 7th Company, and to open a flanking fire on the Jägers. Whilst this movement was being carried out, the battalion adjutant ordered out the supports of the 6th and 8th Companies, which took post on the right of that of the 7th. With these went here and there men from the shooting line. This portion of the 2nd Battalion advanced towards the north, and after driving back the Jägers and crossing over the hill had now to fall back to the edge of the wood, and was for the remainder of the fight

separated from the 5th Company, and the scattered portions of the battalion which remained in their original positions. The battalion commander had fallen in this fight. Subsequently the commander of the 6th Company, seeing two Austrian companies apparently isolated from their regiment issued from the wood with the 6th and 7th Companies and routed them. Captain von Boltenstein of the Fusilier Battalion, finding his fire masked by the 2nd Battalion, ordered his company commanders to withdraw their men from the edge of the wood, and to re-organise them further in rear. The units thus formed consisted of men of all four companies, time not allowing further redistribution. At this part of the wood had already commenced the mixing up of regiments, battalions, and companies.

To return to the 1st Battalion. Against the southern edge the Austrians had already advanced from the direction of Cistowes before the arrival of the 2nd and 4th Companies. The Austrian 13th Jägers had entered the wood, and moving in a north-westerly direction passed by the right flank of these companies and eventually encountered the 1st Company, which had been left at the western knoll on the ridge. Against the 2nd and 4th Companies, which had barely time to place their shooters in position at the edge and to bring up the supports into the firing-line, the battalions of an Austrian regiment, supported by the flanking case fire of a battery advanced. The first attack beaten off, the 3rd Company was brought up into the line and the renewed attack repulsed, some of the 27th Regiment on the right taking part in the defence. Meanwhile from the 1st Company on the knoll several patrols had been sent out to the south and west to keep up communication with the rest of the battalion and to ascertain the state of affairs in the western part of the wood. Those sent to the west came quite suddenly in the dense undergrowth on the advancing 13th Jägers, and must all have been killed or taken prisoners, for the first intimation of the attack was the sudden opening on the right flank of this company of a heavy fire, before which the surprised groups at once abandoned their position and fell back. The company now retired, being pursued by fire only, which ceased as soon as the Prussians disappeared from view in the wood. Rallied by the energetic efforts of the officers and the non-commissioned officers, the retreating shooting-line was brought to a stand on a level with the supports about 100 paces in rear. A few minutes later, the whole company, two zugs extended, and the third closed in the centre advanced to the attack. The Austrians were in their turn completely surprised; they fired unsteadily and too high; their front line falling back, came on their own advancing supports and hindered them firing, and in a few moments the whole Austrian line turned and fled westerly, leaving the Prussians in possession of the knoll. It was now about 10 o'clock, and a short pause arose in the fight, which was at 10.15 renewed by the attack from the south by the Austrian Poeckh Brigade; with this attack commenced the decisive struggle for the possession of the wood. The whole of the 7th Division was in the fighting-line; of reserves there were none, whilst the Austrians repeatedly sent fresh intact brigades into the fight, supporting them by the fire of 128 guns.

Up to this time the commanders had been able to keep the tactical units fairly together and to restore order during the pauses of the fight ; but the fight which now commenced, and which was carried on for the most part in the interior of the wood, can be described only as a pell-mell of different battalions, companies, and zugs. The scattered troops, deprived of their leaders, losing their way in the dark and the powder-smoke, and attacked in overwhelming force, sometimes in front, sometimes in flank, rallied round the nearest officer, indifferent whether he was one of their own or not, and even round some non-commissioned officer or energetic private soldier, to be led again against the enemy.

The attack on the southern edge directed its right on the south-east angle of the wood, the left passing east of Cistowes and moving north. It was carried out by the Regiment Archduke Karl and the 8th Jägers. To meet this attack were the four weakened companies of the 1st Battalion, the 1st Company having been brought up from the knoll, and on each flank also detachments of the 27th Regiment. On both flanks of the battalion the Austrians gained a footing in the wood, but meeting in the interior men of the 66th and 67th Regiments they were driven out. The attack on the 26th in the centre was repulsed. The unsuccessful attack was renewed by six fresh Austrian battalions. It was impossible for the defenders to hold their ground against the brave and determined advance of this overwhelming force ; the Prussian officers, hastening from one zug to another, encouraged their men by word and example, but gradually the 26th and 27th fell back, holding tenaciously to every favourable clump of trees until turned in flank, or until overwhelmed in front, when the retirement had to be continued. But when the knoll and the saddle, where the 1st Battalion had first encountered the Austrians in the morning, was reached, it was possible to organise a defence, and then the tide began to turn ; for whilst the Austrians were held in front, some companies of the 67th advanced from the west against their left flank, and a company of the 66th, with the 9th and 10th Companies of the Fusilier Battalion of the 26th, which had been got together after their fight on the eastern edge, attacked their right flank. The Austrians, their retreat thus endangered, fell back ; the Prussians followed energetically, and again at 10.45 was the southern edge in the hands of the Prussians.

But now General von Fransecky, who on foot, owing to the loss of his horse, had come to the knoll and was nearly taken prisoner there by some of the Jägers, received information that the reserve battalions—the 1st and 67th of the division—had already gone towards the south-west of the wood, and that the Austrians were developing an attack along the line Maslowed-Horenowes on his left rear. The general, therefore, directed Major Paucke to collect the 1st Battalion and to undertake the occupation of Benatek. Of the battalion, only the support of the 3rd Company, having not been under heavy fire, retained its tactical cohesion ; this was joined by two zugs newly formed of men of other companies ; with these four zugs, and the section with the colours, Major Paucke moved off about 11 o'clock towards Benatek. With the

remainder, and with men of other regiments in the neighbourhood, Captains von Westernhagen I. and von Horn, commanders of the 2nd and 4th Companies 26th Regiment, proceeded to form two companies each of 100 to 150 men, and in two zugs. The zug leaders, who were two first lieutenants, one second lieutenant, and a portepiefähnrich, belonged to the 2nd, 1st, 4th, and 3rd Companies, respectively. During the fight just described, the 5th Company of the 2nd Battalion retained hold of the projecting angle at the south-east point of the wood. The trees here were high, and stood up against a clear background, so they formed a good target for the Austrian guns; and the loss of the company, some fifty men, was mainly due to the artillery fire. The frequent attacks by the Austrians never came nearer than 100 paces, and during them the Prussians enjoyed a respite from the fire of the artillery.

On the eastern edge facing Maslowed in two groups at the north-east and south-east angles (*dd*) of the piece of wood standing out towards the village, the rest of the 2nd Battalion, with companies of the 66th Regiment between the groups, held their own. General Fransecky had ordered the 9th, 10th, and 12th Companies of the Fusiliers, who were originally here, to go to Benatek. The 9th and 10th received the order when occupied in rallying after their repulsing the right wing of Poeck's Brigade. The 11th and 12th only partially carried out the order; the greater part of them, under the battalion commander, Captain von Boltenstern, are found on the left of the 1st Battalion when this had regained the southern edge of the wood. Captain von Westernhagen had, after driving back some Jägers by his newly-formed company of the 1st Battalion, also arrived here with half of it; the other half not moving forward, as deceived by the thickness of the wood its commander did not understand the situation. Some of the 66th Regiment were here also.

The defending force at this part of the southern edge consisted, therefore, of the 5th Company, half von Westernhagen's company, von Horn's company, von Boltenstern's half battalion of the Fusiliers, von Werder's half battalion of the 66th, and small bodies of the 27th Regiment. Taken altogether they mustered little more than one Prussian battalion at war strength, and what with the march on the preceding night and the fighting in which they had already taken part, they were fairly exhausted. The attacking force now advancing was fourfold their strength, and one-half of the force had not yet been under fire. The front occupied by the defence was some 800 paces, and was, therefore, out of proportion to the numerical strength of the defenders. With the attack from the south came simultaneously one from Maslowed against the eastern edge. The defence on the southern edge had now to give way, and fell back to the crest of the ridge in rear, where, aided by the 4th Rifles and a battalion of the 72nd Regiment from another Prussian division, the frontal attack was held; von Boltenstern's half battalion of the Fusiliers being, however, forced to retire still further in a north-easterly direction to the eastern edge. Past the right flank of the Prussians bodies of Austrians forced their way, a battalion of the Erzherzog Karl Ferdinand Regiment arriving finally at the open ground beyond the north-west edge, were

surprised by a squadron of the Prussian 10th Hussars; they were taken prisoners.¹

The left flank of the force attacking almost simultaneously the eastern edge, sought to combine with the right of the south attacking force, and now the 5th Company at this exposed point had to give way. The company had lost nearly 100 men, about half its strength, and only 70 to 80 men could be collected for the retreat in a northerly direction. The main eastern attack failed, however, owing to support received by the defenders from companies of the two already named battalions of the 8th Division, and the attacking force was followed into the open. A third attack was, however, successful. The wood edge had to be given up. In the retreat every foot of ground was contested; but slowly fell back the Prussians, all tactical cohesion at an end, Musketeers, Fusiliers, the 66th Regiment, the 26th Regiment, companies and zugs, broken up and all forming a motley crowd, each fighting as often under some officer strange to him as under his own. The right wing of the eastern attack was, pressing hard forward towards the northern edge, and here encountered von Boltensern's half battalion already driven back from the southern edge and ridge. It no longer consisted only of men of the 11th and 12th Companies. A portion had disappeared, having lost touch in the fight in the interior of the wood; on the other hand, men from other regiments and battalions had closed to it, so that all corps in the division were represented in it. As the enemy closed, a successful counter-attack resulting in the capture of numerous prisoners was made. For between three and four hours had the wood fight now lasted; noon had arrived, and by this time the regiment which at 9 had entered and then traversed the wood in perfect order, and had to the last used every endeavour to maintain that order, was now thoroughly broken up. The situation in each battalion was as follows:—

1st Battalion: The combined company of von Horn, with a zug of that of von Westernhagen, were fighting in the middle of the wood; another zug of the latter company was struggling hard against the Austrian Jägers. In the north-east projecting piece of wood was another zug, which in the first advance had been detached in that direction to protect the flank. The headquarters of the battalion, with four newly-formed zugs, were occupying Benatek.

2nd Battalion: The 5th Company, reduced to half its strength, was the only company in any way resembling an original unit; it was retreating to the northern edge, where it joined part of the 8th Company which had been driven back from the eastern edge. Some schützen

¹ The capture of this battalion is recorded in the Prussian official account, where the statement is made that the battalion had lost all idea of its whereabouts. The incident has been frequently quoted as an instance of the difficulty of leading in woods. It seems, however, most improbable that a battalion going forward unopposed should have made such a blunder in traversing from south to north the Wood of Maslowed. The account given in the Regimental History of the 26th seems far more likely to be correct, and it is reasonable to doubt that the battalion lost its way at all, but that they were surprised by cavalry when issuing from the point at which they aimed.—L. A. H.

groups of the 5th Company had joined the 6th Company which, with the 7th, was still obstinately resisting the progress of the Austrians from the eastern side; the 6th, 7th, and 8th Companies were so inextricably intermixed, that each contained hardly more than half its own men.

The Fusiliers, in much a similar condition, were either in Benatek or were fighting in the eastern part of the wood. From the northern edge had issued from time to time stragglers who had lost their way. These were at once organised into zugs by a staff officer, and re-entered into the fight. Detached bodies of Austrians, which had advanced past the Prussians in the wood, were now emerging from the northern edge from time to time, and even fruitlessly attempted to gain possession of Benatek.

The division itself was similarly split up: in the south-west angle fought principally the 27th and 67th Regiments. In the centre, parts of the 26th, a half battalion of the 66th, and portions of both battalions of the 8th Division. This force was completely isolated, and momentarily expected an outflanking attack both on the east and west. That this did not take place was due probably to the difficulties of seeing and leading being common to both the Austrians and the Prussians. In a wood, neither defeat nor victory is at once apparent, and, therefore, for a time the disasters due to the former, and the reaping of the fruits of the latter, are temporarily postponed. On the left wing parties of the 66th and 67th still held the smaller pieces of wood, and small detachments, nearly all in extended order, sought to hem in the Austrians who had already penetrated into the eastern edge, and to thus stop their further advance. Fourteen battalions and 24 guns had fought against 128 guns and more than 50 battalions for the possession of the junction point of the 1st and 2nd Prussian Armies.

Soon afterwards arrived on the left the Guards Corps of the Crown Prince's Army; the Austrians gradually retired, the task of the 26th Regiment was completed, and the wood fight was over.

The losses in each company were as follows:—

	KILLED.			WOUNDED.			TOTAL.		
	Officers	N.C.O's & Men.		Officers	N.C.O's & Men.		Officers	N.C.O's & Men.	
1.	- 0	22	-	3	45	-	3		67
2.	- 0	14	-	1	36	-	1		50
3.	- 1	9	-	1	21	-	2		30
4.	- 0	10	-	1	32	-	1		42
5.	- 0	19	-	2	76	-	2		95
6.	- 0	28	-	2	51	-	2		79
7.	1	22	-	2	64	-	3		86
8.	- 0	11	-	1	45	-	1		56
9.	- 0	11	-	2	32	-	2		43
10.	- 0	8	-	0	26	-	0		34
11.	- 1	21	-	2	31	-	3		52
12.	- 1	19	-	1	45	-	2		64
	4	194		18	504		22		698

8 men missing.

In addition to the above, one battalion commander was killed ; one battalion commander, the regimental adjutant, and a battalion adjutant wounded.

REMARKS.

The leading of the 26th Regiment in the Swip Wald seems to me to be a model for that leading which is required for modern war ; but I have been somewhat doubtful whether it is wise to publish it in a journal widely circulated in our Army, for neither in barracks nor out in the field are the units of that Army, large or small, yet emancipated from the heavy yoke of centralisation of command and responsibility ; and in the foregoing narrative, and also in that which follows, the enemies to decentralisation may find facts supporting the pernicious doctrines they maintain. My own view is that if centralisation needs diminishing, decentralisation needs control, and I regard the Swip Wald as an illustrative instance of centralisation properly exercised ; whilst the succeeding narrative will show the evils of decentralisation uncontrolled.

The two chief characteristics of the operation just described are, first, the firm hold retained for so long by the battalion and company officers over their commands ; secondly, the consequent postponement of the arrival of that period of confusion and chaos which must eventually prevail to a greater or less degree in every stubbornly contested fight for the possession of woods, and, in fact, in all hard fighting. It will have been noticed that practically the whole regiment, notwithstanding occasional encounters with the enemy, and in spite of the physical difficulties in the path of the advance, arrived at the southern and eastern edges of the wood in as orderly formation as if they had been advancing from one end of an open plain to the other. Less the haste more the speed, was strikingly illustrated here. But those were the days before the company leader assumed the position of an irresponsible autocrat. The companies regarded the battalion as the body of which they severally were the members. Unnecessary precipitancy in the devolution of control was at present unknown. Absolutely necessary as is this devolution in modern war, the right judgment of the moment when it becomes necessary is one of the marks of the real leader of every tactical unit great or small in the present and the future ; and the Swip Wald also shows, "Get into order" must be the call by every tactical leader in the pauses of a fight, and "Rally to me" that of every such leader when in the stress of battle his men are being swept back by an on-rushing and hostile tide.—L. A. H.

THE ADVANCE THROUGH THE BOIS DE GIVODEAU, 30TH AUGUST, 1870. (Plan II.)

In striking contrast to the leading just described was that of this same regiment in 1870. Four years later, the 26th Regiment finds itself ordered to advance against the southern edge of the Bois de Givodeau. In the *personnel* of the officers, the regiment has greatly changed during that short period, owing, to a great extent, to the drafts on it to furnish contingents of officers and non-commissioned officers for the formation

of new regiments. There is a new regimental commander from another regiment; similarly a new commander of the 2nd Battalion. Major Fritsch, who led the 6th Company at the Swip Wald, now commands the 1st Battalion; the former commander of the Fusilier Battalion has only four days ago been sent to command another regiment, and has been replaced by Captain von Lucadou, who was with the Ersatz Battalion in July, 1866. Only the 2nd, 4th, and 7th Companies have with them their old chiefs; four other companies are led by officers who were present in the Swip Wald; the remaining five company leaders were not there. Eight officers of lower rank who were in that fight are still with the regiment, three of the adjutants the same; so that altogether nineteen out of the sixty-eight officers with the regiment had had experience of leading in woods. Among the subalterns were no less than four *portepeefähnrich*, twelve second lieutenants of the *Landwehr*, and fifteen regular vice-sergeant-majors. Of the sixty company officers, twenty-nine were on its active list in peace-time. On mobilisation five companies had passed into the hands of new commanders. The regiment is in its old brigade the 13th, with the 66th Regiment as before.

At about 3.30 p.m. the 13th Brigade, which, as in 1866, was composed of the 26th and 66th Regiments, was on the east side of Beaumont, having advanced from the south, driving back the French, who, overwhelmed by the powerful artillery fire of the Germans, had withdrawn their guns from the ridge on which stands the Bois le Fay, and with their infantry also had disappeared northward under cover of the Bois de Givodeau. The brigade now moved towards the wood, the 26th being in second line to the sister regiment—the 66th. Owing to the brigadier having been wounded; and Colonel von Schmeling having to take his place, the command of the regiment had devolved on Major Fritsch, who was replaced by Captain von Horn. In the further advance the 66th Regiment was directed against the south-west angle of the wood, the 26th against the southern edge and the south-eastern angle. Only one company had opened fire against the wood, from the edge of which the French were plying their chassepots; the edge was taken by a sort of spontaneous rush, and along the edge the regiment rallied in the following order of companies from right to left:—11th, 12th, 9th, 3rd, 4th, 1st, 2nd, 8th, 7th, 6th, 5th; the 11th had extended two *zugs*, the other companies only one. The 10th Company was absent on baggage-guard duty. By order of Major Fritsch the extended *zugs* and the supports halted at the edge to restore the order lost in the attack. It was now 4.30 p.m. The advance was now to be continued. Major Fritsch, therefore ordered that to traverse the wood all companies should go forward in a northerly direction from their present position; and he further directed that, on arriving at the further edge, they should await orders. It is well to note that the officers of the German Army did not make use of the magnetic compass in this campaign. The Bois de Givodeau is about 1,500 paces deep from south to north, and 2,300 paces wide from east to west. Its character is described in the History of the Regiment as follows,

The wood is strikingly similar to the Swip Wald on the battle-field of Königgrätz. Both woods are of about the same size, and also irregular in shape, but the saliency of the Bois de Givodeau on its southern side is far more pronounced. Both are on hills, the sides of which are cut into by numerous lateral valleys, and are of many varying degrees of slope. The passage through the eastern portion of the wood is much more difficult than that of the other parts, and is hardly practicable for infantry, for the hill falls tolerably steep to the Meuse, and in some places is almost precipitous. Unlike the Swip Wald, the Bois de Givodeau consists almost entirely of high leafy trees. Here and there there is thick undergrowth, which consists partly of briars forming thickets, to be broken through only with an expenditure of time and labour. The ground was slippery from the rain, and in the interior of the wood a sort of twilight prevailed.

On the plan (Plan II.) is shown the relative positions of the companies and zugs on their arrival at the further edge. The positions are reproduced as given in the plan in the Regimental History. To that plan is appended a note to the effect that for the better understanding the situation the schützen zugs which separated from their companies are shown as closed bodies.

The course taken by each company in traversing the wood will now be described beginning with the right of the original line the 11th Company. This company had, for the attack on the south-eastern point extended two zugs, the right zug being under Lieutenant Fulda, who had received the order to extend to the river Meuse, and to advance north along the bank of the river. The subsequent order given by the regimental commander to halt did not reach him, the bearer having been killed on the way by a chassépot bullet coming apparently from beyond the river. As soon as Lieutenant Fulda had entered the wood the half of the other zug joined on to his own zug, and he arrived in due course with one-and-a-half zugs at the northern edge where he halted and awaited the arrival of the remainder of the company, which he believed to be following close behind him. Captain von Collas, the company commander, had of course intended to follow Lieutenant Fulda, but owing to the closeness of the southern part of the wood failed to maintain the true direction. In the endeavour to force their way through underwood and thick brambles, the closed zugs got so far apart that Major Fritsch ordered Portepeefähnrich Witte to extend half a zug to cut a way with hatchets and side-arms. The men worked hard, but were far too slow for the impatient company leaders. Gradually the wood became more open.

Some sixty or seventy prisoners were captured by Portepeefähnrich Witte in the bushes. Through bushes and brambles, and frequently obliged to go round them, the one-and-a-half zugs gradually lost direction more and more, and when they eventually reached the open they found themselves at the north-western edge instead of the north-eastern, and some 2,500 paces away from the other half of the company.

12th Company—This company, with which the battalion commander went, had extended one zug in advancing against the wood. The company moved forward on the left of the 11th Company, but soon lost

direction, inclined to the right, presumably in rear of the 11th. After some time it struck on the road along the bank of the river, and emerged from the wood at the north-eastern edge, where it joined the half of the 11th Company under Lieutenant Fulda.

9th Company—In close proximity to the above, and at the extreme eastern end of the line, came the two zugs, the support of the 9th Company under Second Lieutenant Holtzheuer. The schützen zug of the company, under the company commander, had first entered the wood, and then diverging more to the west had got separated from the support, which went more to the east. The two groups were some 500 paces apart. The company had been somewhat in advance of the others when moving against the southern edge.

4th Company—The extended zug under Lieutenant von Sanden had led into the wood. On the right of this zug came the single extended zugs of the 3rd, 1st, and 2nd Companies between it and the 12th Company. This company, as already mentioned, had edged away to the east to the river road. In order to maintain connection, these three zugs of the 1st Battalion did the same. Whilst moving in this direction they were met by the battalion adjutant, who brought them back again to a northerly direction, and eventually they arrived at the edge on both sides of the Sartelle-Villemontroy road. Lieutenant von Sanden, with the extended zug of the 4th Company, was not aware of this original edging away to the east until he had lost touch with the other zugs. So soon as he learnt what had happened he moved also eastward to regain touch. But, as just mentioned, the zugs had again changed direction to the north. Lieutenant von Sanden must have, therefore, passed in rear of them, and on reaching the edge of the wood he found himself in the river valley. The two supporting zugs of the company maintained direction, and issued west of the Villemontroy road.

3rd Company—The supporting zugs of this company and the schützen zug collected also close to the same road.

2nd Company—The position of the schützen zug has already been given. The two supporting zugs struck on the left half of the 11th Company in its erratic course to the north-west, followed it, and eventually arrived on the north-western edge on the Mouzon road some 1,800 paces in a direct line away from its other zug.

1st Company—This company emulated the 2nd in its divergence from the correct direction, and is found with its supporting zugs on the extreme left of the line yet further distant from its schützen zug than were those of the 2nd Company.

8th and 7th Companies—To these two companies, accompanied by the battalion commander, it fell to have to pass through a specially difficult part of the wood. Only by twos and threes could progress sometimes be made, and the advance was slow. Fortunately, the original direction was maintained, and they arrived at the right point, having lost only one of the extended zugs—that of the 8th Company—which, having been engaged in capturing French soldiers found in the wood, had gradually gone in a more westerly direction, and a thousand paces

distance, found itself the right zug of the medley of zugs facing north-west on the Mouzon road.

6th Company—Into the line just mentioned had entered together the schützen and supporting zugs of the company, which had kept together but had lost direction.

5th Company—Between the 6th Company and the schützen zug of the 8th came now the supporting zugs of the 5th Company, the schützen zug having gone north about 1,200 paces away. The commander of the company had been placed *hors de combat* before entering the wood, and the leading had devolved on a second lieutenant of the Landwehr from the 6th Company. In the wood the commander of the schützen zug, a second lieutenant of the Landwehr, was wounded, and was replaced in command by a vice-sergeant-major doing duty as an officer.

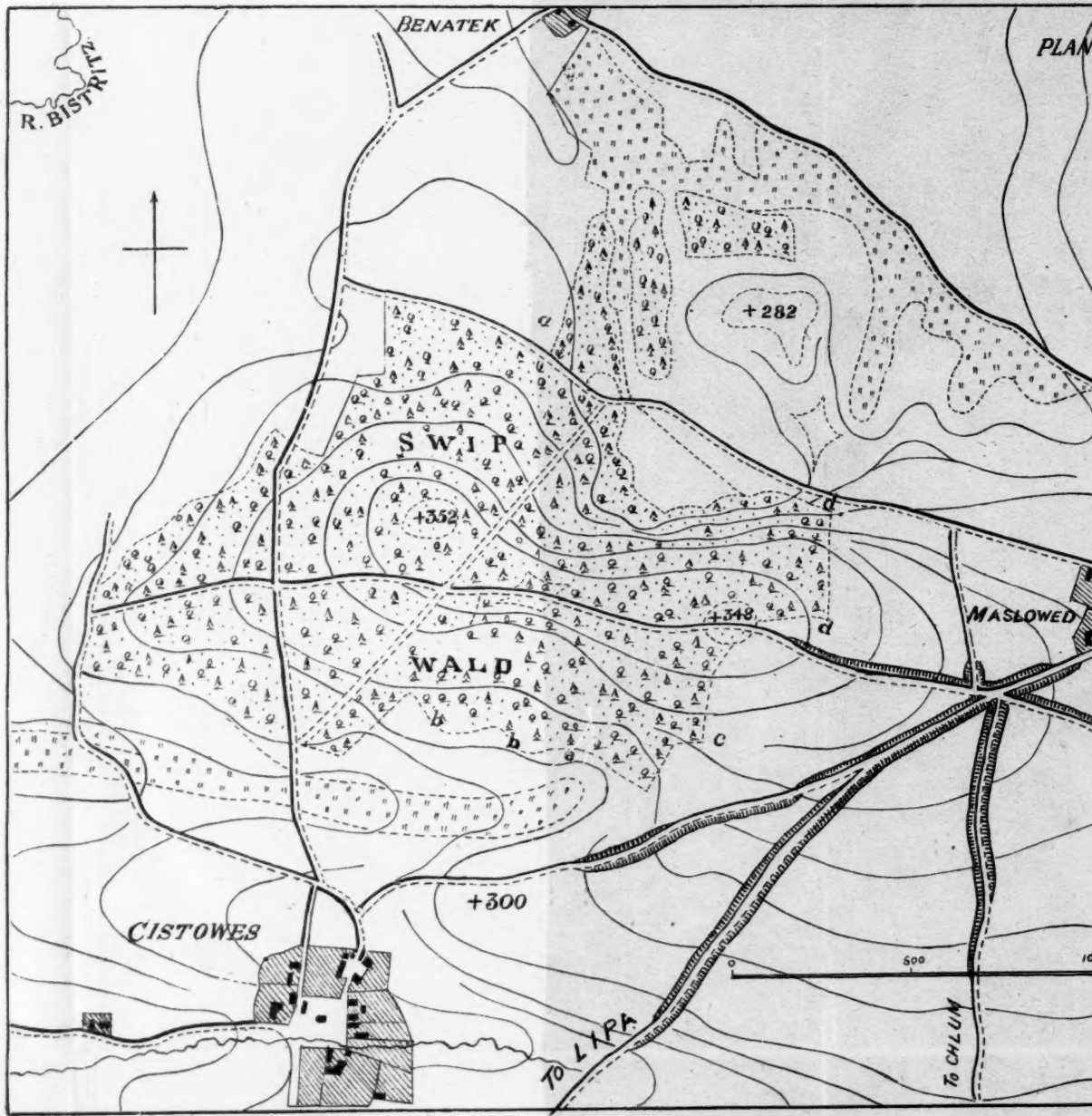
Although the French offered no resistance in the wood, shots were constantly heard and on all sides.

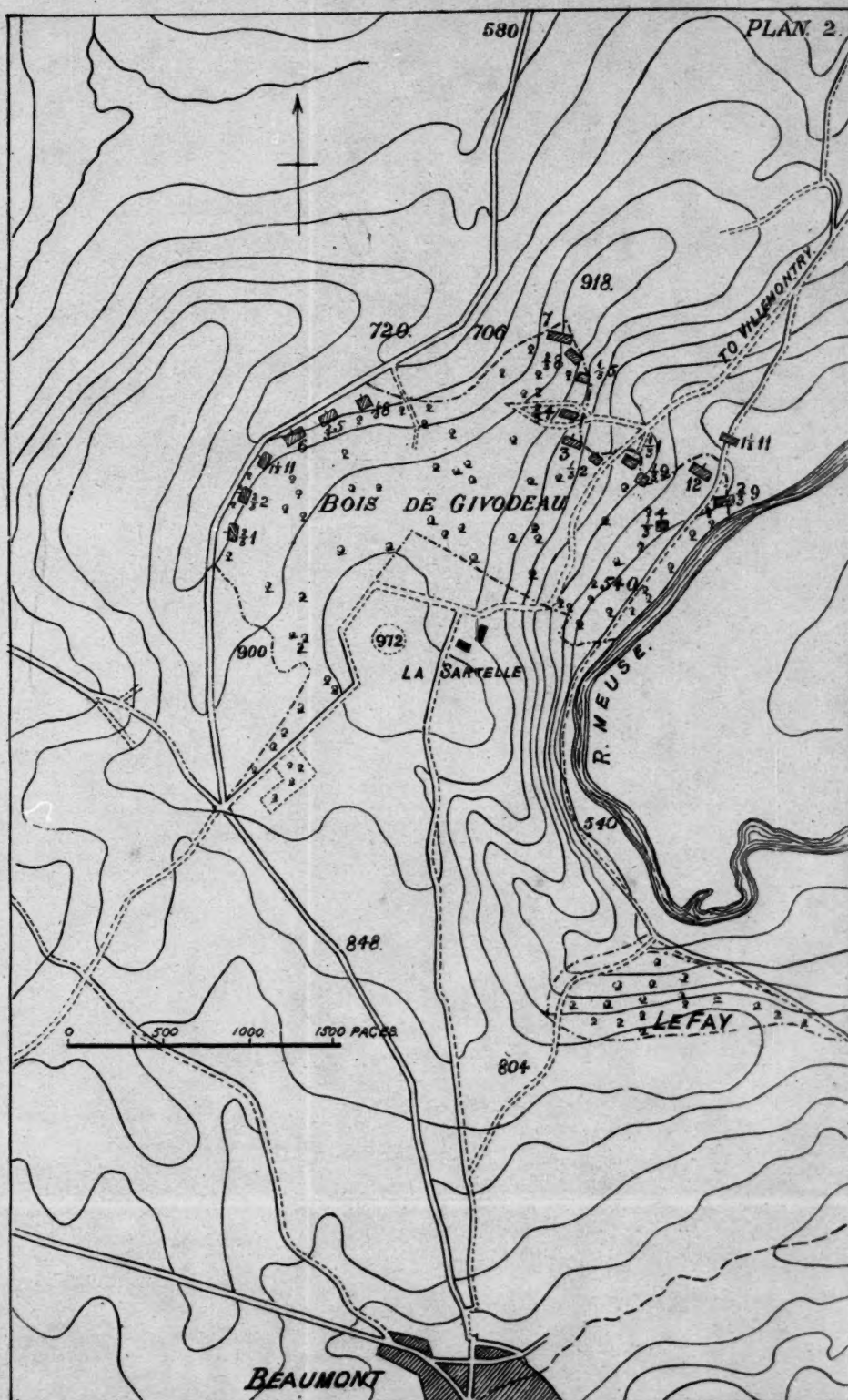
At about 5 p.m. the positions shown in the sketch had been reached. The leading in the wood had broken down completely, and the regiment found itself in two widely separated groups; the eastern group of a strength of about seven companies, of which two only were intact; the western group of a strength of four companies, only one company being intact. With the former was Major von Rostken, the commander of the 2nd Battalion, Captain von Horn, the commander of the 1st Battalion, and Captain von Lucadou, the commander of the Fusilier Battalion; with the latter the regimental commander, Major Fritsch. Unity of command was now out of the question, so far as the regiment was concerned. Rallying took place where possible. Portions of the western group became involved at once in a struggle against the enemy; and Major Fritsch, who still retained hold of about three companies, on finding the 93rd Regiment, in the sister brigade, advancing northward on his left, joined with them in the advance, and directed the regimental adjutant to direct all detachments he could find in this part of the wood to collect at a quarry to the north. Eventually a miscellaneous group of twelve zugs, numbering in all some 700 men, assembled at the quarry. Among them was the whole of the 6th Company. From the rest was formed two half battalions. The first consisted of two zugs of the 1st and two zugs of the 5th Company, the command being given to Second Lieutenant Gräser, an officer from the Reserve; the second was made up of two zugs of the 2nd Company, one of the 8th, and one-and-a-half of the 11th, the command being given to Captain von Collas, the leader of the 11th Company. As a unit, the regiment had, by its unorderly advance through the wood, become useless for any further operations against the enemy who were holding the ground beyond.

REMARKS.

One of the most remarkable points in this operation is that the order to advance in line from the southern to the further edge in a northerly direction emanated from the officer, Major Fritsch, who in the Swip Wald commanded a company in the battalion of which the com-

mander, Major von Gilsa, as already narrated, considered that so long as an advance in a close battalion column was possible, it was desirable to delay the deployment into company columns. The explanation of the unsatisfactory conduct of the operation of 1870 as compared with that of 1866 lies, I entertain not a shadow of a doubt, in the desire for independent leading, which was fostered so strongly in the intervening period by the change from close to more open tactics. Corroborative proof of the explanation is forthcoming for those who study the working of battalions in the war of 1870-1; but there can be few soldiers who will not prefer the leading of Major von Gilsa to that of Major Fritsch. A burning desire to get at an enemy is a highly laudable feeling, and ought in every way to be encouraged; but, if in the advance, or when hurrying to the "sound of the guns," the unit loses the main portion of its fighting power as a unit, indulgence of the feeling leads it on the high-road to disaster.—L. A. H.





A Representation of the Armies
OF
KING CHARLES I.
AND
SIR THOMAS FAIRFAX,
 exhibiting
the exact Order in which the several Bodies
of
 Infantry & Cavalry were drawn up,
Preparatory to the
BATTLE OF NASEBY.
 fought the 14th of June 1645.

King's Baggage



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THE BATTLE OF NASEBY.

AN engraving representing the formation of the two Armies on the morning of the battle of Naseby, now in the Royal United Service Institution, is of considerable interest, and probably of accuracy; but it is impossible to allot, except at hazard, a date to its execution, as the margin and lettering have been recklessly amputated.

The "*Anglia Rediviva*" of Sprigge was printed in 1647, two years after the battle; two copies of the book are in the British Museum, each containing a plan of Naseby fight, larger than that in the Institution, but evidently from the same design; and to the reprint of Sprigge, published by the Oxford Press in 1854, a diminished sketch of the larger plan is attached. The engraving in the Institution is elaborated in detail, and shows Naseby Church Tower as it stood at the time of the Civil War.

Descriptive writing, even of the highest power, fails in representing a battle scene with the same vividness that a graphic outline, if accurate, easily attains. Napier's marvellous description of the battle of Albuera, demands as a complement the graven plan he drew right well; the defence of Rorke's Drift has its fame immortalised in another manner by the painter's art. Were a contemporary plan in existence of the Israelites crossing the Red Sea, we might realise that action as we do the passage of the Beresina, whilst the unassisted narrative, as it stands leaves many points in obscurity.

Robert, Earl of Essex, impotent, at least as a soldier, had been ousted from chief command of the Parliamentary Armies, by the "self-denying ordinance" of December, 1644, which specially aimed against the Earl, avoided Oliver Cromwell; Sir Thomas Fairfax was selected as successor, partly from his social position, but chiefly on account of his previous experience in campaigning both at home and abroad.

From the outbreak of the Civil War, in 1642, he had faithfully served the Parliament, and although in the early months his forces had been roughly handled by the better equipped cavaliers, time was serving the Roundheads, and their instilled, perhaps fanatical, religion was rapidly forging a cohesion more effective than the kingly loyalty which had hitherto been the mainspring of the dominating *moral* possessed by their opponents.

Fairfax's skilful junction with the Scots enabled him to win the battle of Marston Moor in July, 1644, and thence onwards his reverses were few, his victories were many.

Oliver Cromwell was born in 1599, and until 1642 can have had no military training or knowledge; but in that year he, at the age of forty-three, raised a troop of cavalry in his own district of Huntingdon,

for which borough he had been elected Parliamentary representative in 1628, and in the neighbourhood of which from early maturity he had lived a country gentleman and a foremost man in all county business.

Speculation has an ample field in the attempted solution of a still unanswered problem regarding the origin of the undoubted military ability shown throughout the Civil War by Oliver Cromwell. Courage and virility are gifts of nature : failing war experience, skill can come but from study of records, or by assimilation of the experience of others. Records were scarce and undigested in the middle of the seventeenth century, but then, as now, men could be found within the four seas who had played their part in the physical struggle for existence, which is the unexceptionable rule of Nature.

Sir Thomas Fairfax had served with the English Army under his brother-in-law, Lord Vere, in the Netherlands ; and although a dozen years younger than Cromwell, he, at the outbreak of the Civil War, was appointed General-of-Horse under his father, Lord Fairfax, the Northern commander.

The political schism between the Independent and the Presbyterian parties of the Parliament forces at a later date found the abler, older, and stronger subordinate on the Independent side, and Fairfax resigned ; but his lessons had been taught, and Oliver Cromwell, starting as a raw troop leader, developed into a general, ripe in the experience of many battles and of numerous sieges.

Other officers on the staff of the Parliamentary Army had served in Continental warfare, notably D'Ollier, a Hollander by birth, who, under Gustavus Adolphus, had assisted at the final defeat of Tilly, the ruthless destroyer of Magdebourg. Rushworth, a kinsman of Fairfax and his secretary, points to the intimacy between Cromwell and D'Ollier ; and commanders of all times, even to our own, have incurred obligations, often faintly acknowledged, to their staff officers.

The short-lived Ireton, soon to become Cromwell's son-in-law, had no war experience until 1642, but at Naseby he led the left wing of the Parliamentary Army, with Cromwell on the right and Fairfax in chief command.

The King commanded his own Army, but with small experience and less military skill he failed in supporting his nephew's success on the right, or in retrieving the defeat of his left wing commander.

Prince Rupert of Bavaria, twenty-six years of age at the date of Naseby's battle, where he led the right wing, was the son of the King's sister ; and except that gained in the early actions of the Civil War, he had no military knowledge ; he was hotly, if not persistently, courageous ; he was debauched and insubordinate, and these qualities remained to him long after the Restoration, when his unbridled cynicism offended the late Mr. Samuel Pepys.

Sir Marmaduke Langdale, sheriff of Yorkshire, embraced the King's cause and commanded on the left ; he had some military resource. He raised troops at his own expense in his own county, and was partly the cause of Fairfax's ill-success in the early days of the war.

These were the commanders at the battle of Naseby, and the positions are shown in the engraving as occupied by them on the forenoon of Saturday, the 14th of June, 1645, the day on which King Charles I. was present at his last battle; the loss was to him disastrous, and the herald of coming destruction.

The battle-field lies ten miles north-north-west from Northampton, and sixteen miles south-south-east from Leicester. A straight line from one to the other passes directly through the village of Eastby, which Ireton, after some resistance occupied with the advanced guard of the Parliamentary Army, on the night of Friday, the 13th, whilst the main body was still three miles further south about Guilsborough.

The old church tower of Naseby, capped by the "hollow copper ball," transplanted from Boulogne in the time of Henry VIII., affords view of the field of battle.

The King's Army, after a retrograde movement northwards towards Harborough, had retraced their steps in the early morning of the 14th, and were in a battle array a mile north from the Army under Fairfax, who formed his line clear of Naseby, but with his baggage train packed and guarded on an elevation lying west of the village.

At ten in the morning the King attacked; Prince Rupert on his right drove back Ireton's cavalry on to and beyond the infantry, and fruitlessly harried the baggage guard; but Cromwell, on the right of the Parliamentary Army, with the advantage of the sloping ground, charged Sir Marmaduke Langdale whilst he was yet ascending and completely overthrew the cavaliers, leaving a portion of his force to guard against further attack, he turned westwards, joined in the overthrow of the still formed central infantry, and routed the hitherto successful Rupert.

The victory was complete and the pursuit so close that the baggage of the King and his fatal correspondence fell into the hands of the victors.

Strategy, in the sense of combined movements by large and disciplined bodies, working for a common object, was totally absent from the earlier portion of this war, and the cause is patent: the country was divided in opinion and the bases were far separated and intermixed; the result was a fair imitation of a faction fight in the sister island, where each head that is seen is promptly assaulted. Tactics on either side were elementary and in harmony with the major operations; one body formed in battle array in direct opposition to the other, and both attacked; officers and men were too little trained for manœuvring to be in any way effective. Frederick the Great was born a full half century later than the date of our Civil War, yet ironsided fanaticism, Rupert's headlong charges, or Frederick's martial science, alike lead to one final goal, the graveyard of Naseby or of Silesia; there the body of the hero and the craven both rest in one long sleep.

Armour and swords are turned to rust,
The warriors' bones are crumbled dust,
Their souls are with the saints—we trust.

NAVAL NOTES.

HOME.—The review on the 26th ult. of the fleet assembled at Spithead, under the command of Admiral Sir Nowell Salmon, V.C., G.C.B., by H.R.H. the Prince of Wales, on behalf of Her Majesty the Queen, was the most striking and important of the national ceremonies in connection with the celebration of the Diamond Jubilee. It was much more than a mere review; it was a demonstration of the force which could be mobilised on a declaration of war, in addition to the powerful squadrons we already maintain in the Mediterranean, in China, and in other parts of the world. At the Jubilee Naval Review of 1887, 128 pennants were assembled, of which sixteen were battle-ships, but only one of the ships then present, the "Collingwood," is now considered a first-class ship; three others, the "Inflexible," "Edinburgh," and "Devastation," still rank in the second-class, while the rest of the battle-ships are quite obsolete, although some of them are still retained on the fighting list in the third class. Of the eight coast-defence vessels only two, the "Rupert" and "Hotspur," can, at present, be considered as of any value, while in cruisers the 1887 fleet was lamentably deficient, this class of vessel being represented by only the "Impérieuse," "Shannon," "Mersey," "Amphion," "Arethusa," "Mercury," and three small torpedo-cruisers, as they were then called, the "Fearless," "Mohawk," and "Archer." Exclusive of the ships of the training squadron only five ships of the 1887 fleet, viz., the "Collingwood," "Edinburgh," "Inflexible," "Devastation," and "Mersey" appeared among the vessels at Spithead on Saturday the 26th ult. In 1887 there were scarcely two ships alike in the assembled fleet, and only three of the battle-ships were armed with breech-loading guns; at Spithead last month, was collected a practically homogeneous squadron of eleven of the most powerful battle-ships afloat, supplemented by four other first-class ships, which, although somewhat older and of a now obsolete type, yet are still formidable fighting-ships, while the six second-class battle-ships, including as they did the re-armed "Devastation" and "Thunderer," could all be depended upon to make a good show in action. Nearly as noteworthy as the battle-ships was the magnificent array of cruisers, which comprised no less than twelve first-class cruisers, all of a most powerful type, including the "Powerful" and "Terrible," and twenty-four second-class cruisers, all relatively speaking new ships with a speed of 19 knots, to which must be added three of an older class, with a 16-knot speed only, and five third-class vessels of which one, the "Pelorus," lately completed has a speed of 20 knots. To these must be added twenty-one first-class torpedo-gunboats, thirty-one torpedo-boat destroyers and twenty first-class torpedo-boats, making a grand total of 136 vessels, everyone of which, with the exception perhaps of the "Inflexible" and "Alexandra," are fit to take their special place in a modern fighting fleet. The number of vessels of all kinds, however, taking part in the review was 165. It is unnecessary to give a list of the ships, as they are all shown by name in the accompanying plan, and a detailed list was also given in the Naval Notes in the June number of the JOURNAL. The fleet was moored in five lines, each line extending nearly five miles (see plan); in lines B and C were respectively 29 and 30 battle-ships and first and second-class cruisers; D consisted of 38 third-class cruisers, gun-vessels, and torpedo gun-boats; F of 48 gun-boats, torpedo-boat destroyers, and special service vessels; and the fifth, G, of 20 torpedo-boats; while line A consisted of all the foreign men-of-war.

The Royal procession, headed by the Trinity yacht "Irene," left the harbour at 2 p.m.; H.R.H. the Prince of Wales flying the Royal Standard

on board the "Victoria and Albert," which was followed by the "Carthage," with the Indian Princes, the "Alberta," the "Enchantress," with the Lords of the Admiralty, the "Wildfire," with the Colonial Premiers, the "Eldorado," with the foreign Ambassadors and Ministers, the "Danube," with the House of Lords, the "Campania," with the House of Commons, and the "Fire Queen." The procession first passed to the eastward of all the lines until opposite the waterway between the lines A and B, between which it passed down from east to west, until arriving between the "Sirius" and the buoy on the north-eastern end of the Ryde middle bank, it turned into the waterway to the right between the "Sirius" and "Hermione," and passed on to the west between lines B and C; on arriving at the west end of the waterway between B and C, the procession turned to the east and passed down between C and D, and, continuing to the right, it re-entered the waterway between the lines A and B, the Royal yacht then dropping anchor in the space left opposite the "Renown." The Royal salute was fired by signal by the different sub-divisions in succession, each ship giving three cheers as the yacht passed, and the whole fleet gave three cheers by signal when the yacht anchored. After receiving the foreign and our own admirals, the Prince of Wales returned in the "Victoria and Albert" to the harbour, coming out again later in the "Alberta" to view the illumination of the fleet, which was a spectacle perfectly unique in its character and of marvellous beauty in its effect. At a given signal the whole fleet instantaneously burst into light, every ship being illuminated with lines of incandescent lamps, tracing out the hulls from and including the waterline up with their barbettes, bridges, funnels, and masts, while on board the flag-ships the admirals' flags were shown in their proper colours—a red St. George's Cross on a white ground—which were clearly distinguishable miles away; this method of illumination was first adopted by the squadron under Lord Walter Kerr on their visit to Kiel two years ago for the opening of the Kaiser-Wilhelm Canal. The foreign ships were also brilliantly illuminated, one feature on board the "Brooklyn" attracting much attention, viz., the continuous lighting up of the British and American ensigns at the mast-head by means of beams from the search-lights, the whole light being concentrated after a time on the English ensign alone. On the Prince's return to the harbour soon after 11 p.m. a final Royal salute was fired simultaneously from all the war-ships in the anchorage. As the night was unusually dark, the effect of this salute was superb and formed a fitting conclusion to the day's memorable spectacular display.

With regard to the imposing fleet assembled for this review, it may be as well to point out that no single ship has been re-called from a foreign station to swell the numbers at Spithead, that in addition to the fleet collected there we have in the Mediterranean a squadron consisting of ten first-class battle-ships, two first and five second-class cruisers, a torpedo-ram and eighteen torpedo-gunboats, sloops and torpedo-boat destroyers, with a coast-defence ship the "Rupert" as guard-ship at Gibraltar, and twelve first-class torpedo-boats distributed in the Reserve at Malta and Gibraltar, while another coast-defence ship the "Orion" is also kept in the Reserve at Malta; on the China station we have a first-class battle-ship, four first-class cruisers (three of which are belted), three second-class cruisers, and nine third-class cruisers, and gun-boats with two torpedo-boat destroyers; while altogether in foreign and colonial waters we have 125 vessels in commission, the most important of which are now all of the latest type and of high speed.

Among the foreign ships at the review the two largest were the Italian first-class battle-ship "Lepanto," and the new Japanese battle-ship "Fuji," the latter similar to our own "Majestic" class, but somewhat smaller; after which the most important was the new United States first-class armoured cruiser "Brooklyn," a vessel of 9,250 tons, 400 feet long, with engines developing 16,000-I.H.P., and a nominal speed of 21·9 knots (a photograph of this ship forms the frontispiece). She has a Harveyized nickel steel belt for

about two-thirds the length of the water line, with a maximum thickness amidships of 8 inches, tapering rapidly, however, to 3 inches, extending from 4 feet above to 4 feet below the water-line; there is further a 6 to 3-inch armoured deck extending from stem to stern, while the eight 8-inch guns she carries as her main armament are mounted in four turrets, also protected by 8-inch nickel steel armour in front, tapering to 5 inches in rear; two of these guns are mounted in each turret, which are placed one forward, one aft, and one on each beam amidships. The secondary battery consists of twelve 5-inch Q.F. guns in armoured casemates, 4 inches thick in front, twelve 6-pounder Q.F. guns, four 1-pounder Q.F. guns, and four machine guns with six torpedo-tubes. Above the armoured deck is a cofferdam filled with cellulose up to the level of the battery deck. With regard to the nominal speed of nearly 22 knots claimed for the "Brooklyn," it must be noted that this was only obtained by running the ship on the measured mile when she was extremely light and nothing like down in the water to her sea-trim.

Next to the "Brooklyn" came the new first-class armoured cruiser "Rossia," which, in her dimensions, is the next heaviest cruiser in the world to the "Powerful" and "Terrible." She is 480 feet long, with a beam of 68 feet 6 inches, and a displacement of 12,130 tons. For two-thirds of her length she has a water-line belt of 10-inch steel, with armoured athwartship bulkheads at the extremities, the foremast of 9-inch steel, and after one of 8-inch; there is also a 2.5-inch armoured deck. The armament consists of four 8-inch guns—mounted each side, two forward and two aft—sixteen 6-inch Canet Q.F. guns, six 4.7-inch Q.F. guns, and eighteen small Q.F. and machine guns, with six torpedo-tubes, one in the stem, one astern, and two on each broadside. Like the "Rurik," the guns are very inefficiently protected; on the other hand, she has a very large coal supply, which is said to be sufficient to enable her to steam to Vladivostok without coaling, and she is also fitted to carry and burn liquid fuel. She has three screws, and the engines develop under forced draught 14,500-I.H.P., giving a nominal speed of 20 knots.

Two other fine first-class armoured cruisers present were the French "Amiral Pothuau," and the Spanish "Vizcaya." Both are new vessels, and are now commissioned for the first time. The "Vizcaya" is a vessel of 7,000 tons, with engines developing 13,000-I.H.P., giving the ship a speed of 20 knots. She is protected for three-fourths of her length at the water-line by a belt of 12-inch Cammel steel, with a 3-inch armour deck running from stem to stern. For armament she carries two 11-inch Hontoria guns, one forward and one aft, in hooded barbettes, protected by 10.5-inch steel armour, ten 5.5-inch Q.F. guns in sponsons, four—two forward and two aft—having end-on-fire, with fourteen small Q.F. guns and eight torpedo-tubes, of which two are below water. The "Amiral Pothuau" is a ship of 5,360 tons, with engines developing 10,398-I.H.P., giving a speed of 19 knots. She has a complete water-line belt of 3½-inch steel, tapering to 2 inches, and her armament consists of two 7.4-inch guns, one forward and one aft, in turrets protected by 7-inch armour, of ten 5.5-inch Q.F. guns and twenty-four smaller Q.F. guns, with five torpedo-tubes. None of the other foreign ships call for any special notice.

The Channel fleet, with the ships specially attached for the manœuvres, left Spithead on Thursday afternoon, the 1st inst., being constituted as follows in two divisions:—

First Division under Vice-Admiral Sir H. F. Stephenson, K.C.B.:—

First-class battle-ships—"Majestic" (Flag), "Prince George," "Mars," "Jupiter," "Victorious," and "Renown."

First-class cruisers—"Powerful," and "Terrible."

Second-class cruisers—"Naïad," "Latona," "Thetis," "Tribune," "Sirius," and "Terpsichore."

Third-class cruiser—"Pelorus."

First-class torpedo-gunboat—"Halcyon."

Second Division under Rear-Admiral J. Fellowes, C.B. :—

First-class battle-ships—"Magnificent," "Royal Sovereign," "Resolution," "Repulse," and "Empress of India."

First-class cruisers—"Blake" and "Blenheim."

Second-class cruisers—"Charybdis," "Hermione," "Sparton," "Sappho," and "Andromache."

Third-class cruiser—"Magicienne."

First-class torpedo-gunboat—"Speedy."

The first division proceeded to Lough Swilly, and the second to Blacksod Bay.

The Reserve Squadron left on the 2nd inst., constituted in two divisions as follows :—

First Division under the command of Vice-Admiral C. Donville :—

First-class battle-ships—"Benbow," "Howe," and "Collingwood."

Second-class battle-ships—"Alexandra" (Flag), "Devastation," and "Colossus."

First-class cruiser—"Australia."

Second-class cruisers—"Venus," "Diana," "Isis," "Melampus," "Apollo," "Æolus," and "Phaeton."

First-class torpedo-gunboat—"Hazard."

Second Division under command of Rear-Admiral H. Pearson :—

First-class battle-ship—"Sans Pareil" (Flag).

Second-class battle-ships—"Edinburgh" and "Thunderer."

First-class cruisers—"Warspite," "Aurora," and "Galatea."

Second-class cruisers—"Dido," "Juno," "Doris," "Mersey," "Leander," and "Brilliant."

First-class torpedo-gunboat—"Antelope."

The First Division proceeded to Milford Haven, and the Second Division to Berehaven. Both fleets then coaled in preparation for the manœuvres, which commenced at midnight on 7th July, and terminated at 6 p.m. on 11th July. The operations of the two fleets were entirely distinct. In each fleet one division operated against the other. At the termination of active operations the usual target practice was carried out, after which the Channel fleet returned to Portland, and the Reserve fleet to Torbay, at which ports the mobilised ships were inspected and dispersed. The Training Squadron proceeded on a cruise to the North Sea, returning in September. The torpedo-boat destroyers, on the dispersal of the fleet, were formed into two flotillas, having their headquarters at Portsmouth and Plymouth respectively, and carried out exercises at sea on the 3rd, 4th, 5th July, after which they returned to their ordinary duties.

The following interesting forecast of the operations to be undertaken by the two divisions of the Channel fleet was given by the naval correspondent of the *Times* on board the "Majestic" :—

"War between the two divisions of the Channel Squadron, stationed respectively the first at Lough Swilly and the second at Blacksod Bay, will be declared at midnight on the 7th inst. The area of operations is bounded by the arc of a circle drawn from Blacksod Bay with a radius of 350 miles extending from the point where this circle cuts the 52nd parallel of latitude to the point where it cuts the 7th meridian of longitude. From these points to the nearest land the parallel and meridian named become the boundaries of the area. Late in the afternoon of the 7th the Second Division will put to sea, leaving one cruiser behind to bring on the news that war has been declared. This cruiser will leave Blacksod Bay at midnight and steam direct to a rendezvous pre-arranged with the battle-ship squadron of the Second Division. The position of this rendezvous is unknown to the other side, but two cruisers of the First Division, presumably the "Powerful" and

the "Terrible," will be allowed to leave Lough Swilly in the course of the 7th and to take up positions north and south of Blacksod Bay by the time that war has been declared. These cruisers are not to attempt to follow the Second Division on its exit from Blacksod Bay, nor the cruiser which leaves later, but they are to wait near the coast until a specified time after war has been declared. At an early hour on the 8th inst. they are to proceed at a speed of 17 knots to search for the hostile cruiser, assuming that she has steered to the westward of them in a constant but unknown direction at a uniform speed of 12 knots. If either of them sights her she is to endeavour to escape, and for this purpose she will apparently be allowed to use her utmost speed, and if it should seem expedient to change her course if she is overtaken, she is required to inform her pursuers of the rendezvous for which she is making, and if she is put out of action under the rules she must return to Blacksod Bay and take no further part in the operations. In the meanwhile the admiral in command of the First Division is empowered to send his remaining cruisers out to scout as soon as war is declared, but may not quit Lough Swilly with his battle-ships until the next day. The admiral of the Second Division will wait with his battle-ships within fifteen miles of his rendezvous until his cruiser has reached him, or, if she has failed to reach him, from daylight on the 9th inst. until daylight on the 10th; but if during that period he is warned by his cruisers of the near presence of his adversary's battle-ships he may endeavour to evade their pursuit. Subject to these conditions his object is to evade his adversary and to return to Blacksod Bay, the corresponding object of the First Division being to discover the whereabouts of the Second Division and to prevent its return to Blacksod Bay, and this object being adjudged to be accomplished if the battle-ships of the First Division have at any time got within three miles of those of the Second Division before the latter have reached a point ten miles from the entrance to their port. The operations will in any case be brought to an end at six o'clock in the afternoon of the 11th, ninety hours after the declaration of war.

"It will be seen at once that the main stress and interest of the operations will centre on the proceedings of the two cruisers told off to search for and intercept the hostile cruiser which is to leave Blacksod Bay at midnight on the 7th and to carry the news of the declaration of war to its own fleet at a rendezvous unknown to its adversary. If both these cruisers fail to accomplish their purpose, the task assigned to Admiral Stephenson will be reduced to that of looking for a needle in a bottle of hay, but their prospects of success are not inconsiderable under ordinary conditions of weather. The problem to be solved by them is as follows: A ship, A, leaves a certain point at an hour which is known and steams at a speed which is known and constant, but in a direction which is unknown save that it lies somewhere in an arc of 180° , of which the centre is the point of departure. At each successive hour after her start A will be found on some point of an arc of which the centre is her point of departure, and the radius the number of miles she has traversed at her known hourly speed—in this case 12 knots. Some hours after she has started, two other cruisers, B and C, each having a speed of 17 knots, start in pursuit from two points on the diameter of the arc equidistant from its centre. From the geometry of the case it is manifest that their courses will be symmetrical, and, therefore, only one of them need be considered in detail. Obviously, if A pursues a course which brings her within sight of B before the latter starts, A will be intercepted within a few hours of her departure, but if she pursues a course slightly more divergent, B when she starts must shape her course so that it intersects that hypothetically assigned to A at a point to which their known speeds will have brought them simultaneously. If the course hypothetically assigned to A should turn out to be the one actually pursued by her, the two ships will meet at this point, and in any case it is certain that when B is at this point A is somewhere on the arc of the circle, hypothetically, and so far as B is concerned, on the quadrant—of which the centre is A's point of departure and

the radius a line joining the point reached by B to the centre. Thenceforward the hourly distance covered by A and B will be twelve and seventeen miles respectively, and if at each successive hour A alters course so as to cut through the arc on some point of which she must be found, she will, when she has traversed the whole quadrant, have steered throughout a series of points, some one of which A must have traversed simultaneously if her course lay in the quadrant at all. Precisely similar reasoning applies to the course of C, who will traverse an exactly similar curve in the other quadrant of the semi-circle in which the course of A must necessarily be, so that, geometrically speaking, it would seem to be certain that A must be intercepted by either B or C at some point or another in the two courses traversed by them which lie symmetrically disposed in relation to the line which divides their respective quadrants.

"The course thus indicated as that to be pursued by B and C respectively is called the "curve of search," and its geometry is explained in a paper issued with the instructions relative to the manœuvres. The curve of search is a device elaborated by two French naval officers, and the system on which it is based is very fully expounded in a volume entitled "*Essai de Stratégie Navale*," published a few years ago. Geometrically it is unimpeachable, but its success in practice must manifestly depend not only on very favourable conditions of weather and navigation, but on an accurate knowledge of the speed and course of the pursued, and an equally accurate adapting to it of the speed and course of the pursuer—conditions not very often likely to be combined with adequate precision in the varying circumstances of actual warfare. However, as the art of scouting with modern war-ships is still almost in its infancy, it is perhaps worth while to try an experiment based on this geometrical method. If it fails to solve the problem propounded in the forthcoming manœuvres, its practical value for the real purposes of war will be largely discounted, because it is very unlikely that in real war the speed of a hostile cruiser would be accurately known to its opponents, or that such a cruiser would neglect the very obvious evasive expedient of frequently altering her course as well as her speed, and because the whole success of the method depends on the accurate appreciation and adjustment of the geometrical conditions involved."

The rules and regulations to be observed by the two opposing divisions of the Reserve Squadron during the manœuvres were as follows:—The duration of "active operations" will extend from midnight of the 7th to 6 p.m. on the 11th inst. No hostile act may take place except during those 90 hours. Vessels at sea before the 5th are merely out in preparation. Battle squadrons cannot be divided, and must be intact at the moment of carrying out their object. The action assigned to cruisers is primarily, on the one side, to screen their battle squadron from observation, and, on the other side, to get touch with the opposing battle squadron in spite of its cruisers, and communicate with their own Admiral. Cruisers can be put out of action according to the following rules:—A first-class cruiser can put out of action a second-class cruiser if she can remain within a mile of her for 50 minutes, or a third-class cruiser if within a mile of the last named for 30 minutes. Similarly, a second-class cruiser can put a third-class cruiser out of action if within a mile of her for 40 minutes. Two second-class cruisers can put a first-class cruiser out of action if they both remain within a mile of her for 100 minutes, and two third-class cruisers can put a second-class cruiser out of action if they are within a mile of her for 80 minutes. Some other combinations may be used, as, for example, one first-class with one second or third-class cruiser can put a first-class cruiser out of action by remaining within a mile of her for 70 minutes, or one second and one third-class can disable one of the second-class by being within a mile of her for 40 minutes.

Provided, however, a larger group than two meet a group on the other side, it must divide in order to act in accordance with the above rules. The period of

action is to be between the two guns which the larger ship must fire to mark it. The first is to be fired when the two ships, in the judgment of the officer observing from the larger ship, are within the prescribed distance, and the second at the expiration of the time allowed. No other guns than those are to be fired. Cruisers put out of action under these rules can take no further part in the manœuvres, but must return to their port flying the pilot-jack at the fore. They may select their own route, but they are strictly enjoined not to communicate any information as to the progress of the manœuvres to the ships of either side whom they may meet on their way. At the expiration of active operations cruisers at the ports will carry out such orders as they have received relative to target practice and to their return to the ports of inspection. A copy of the ship's log and signal log of any ship taking part in the manœuvres, commencing 12 hours before and ending 12 hours after active operations, is to be sent to the Admiralty with the reports of the admirals in chief command. A board of umpires is to be formed in each fleet from the captains of battle-ships to decide upon the claims made by the cruisers of each division.

FRANCE.—The following are the principal appointments which have been made: Capitaines de Vaisseau—J. M. Puech to "Couronne"; M. L. Ferrand to "Algésiras"; P. L. Germinet to "Pothuau"; R. E. Bigant to charge of Submarine Defences at Cherbourg. Capitaines de Frégate—Dufaure de Lajarte to "Tempête"; E. E. Farret to "Surcouf."—*Le Moniteur de la Flotte.*

The first-class battery-cruisers "Tage" and "Sfax" were commissioned at Toulon on the 5th inst. with reduced crews, which will navigate them to Brest, where they will be temporarily attached to the Northern Squadron for the Manœuvres, at the conclusion of which they will return to Brest, where they are to receive new boilers, and undergo thorough repair; the new boilers, which are being constructed by the Forges et Chantiers de la Méditerranée at their works at Monistèsques, will be of the old cylindrical type. The first-class battle-ship "Amiral-Baudin" has left the Active Division of the Mediterranean Squadron, and with a reduced crew, left Toulon on the 28th ult. for Brest, where she is to receive new boilers and undergo modifications in her armament, as has been already reported; her place has been taken by the second-class battle-ship "Courbet," which commissioned on the 10th ult. at Toulon, her complement being completed by the officers and men discharged from the "Amiral-Baudin." The new second-class cruiser "Pascal" also fully commissioned at Toulon on the 1st June, and has joined the Active Division of the fleet, which will further be strengthened by the entry into the squadron of the new first-class battle-ships "Carnot" and "Charles-Martel," which latter ship is to take the place of the "Magenta" as flag-ship of Rear-Admiral Dieulouard, in command of the Third Division; the "Magenta" will pass into the dockyard hands at Toulon for overhaul and repairs. The new first-class cruiser "D'Entrecasteaux," which has been built at the La Seyne yard, Toulon, is commencing her trials at that port. She is a fine ship of 8,114 tons, with engines that ought to develop 13,500-I.H.P., giving a speed of 19 knots; as she is intended for distant stations, her hull is wood-sheathed; her two 24-centimetre (9·4-inch) guns are in barbets, one forward and one aft, protected by 10-inch hardened steel, while her twelve 5·5-inch Q.F. guns are all in casemates with 3-inch armour also of hardened steel; all the guns can be worked either by hand or electricity, as well as the ammunition hoists.

The second-class battle-ship "Redoutable" is to have various modifications carried out in her armament; the six 14-centimetre (5·4-inch) guns forming her secondary battery are to be replaced by a similar number of 10-centimetre (3·9-inch) Q.F. guns on Vavasseur carriages; two of the torpedo-tubes are to be done away with, and an armoured conning-tower is to be erected; four 24-centi-

metre (9·45-inch) guns are also to be substituted for the four 27-centimetre (10·8-inch) guns at present mounted in her central redoubt. The third-class battery-cruiser "Surcouf" is to be commissioned at Rochefort to take the place in the Northern Squadron which was to have been filled by the "Fleurus." An important addition is to be made to the mobile defences of Tunis; the coast-defence battle-ship "Tempête" has been commissioned, and is for the future to be stationed at Bizerta as guard-ship, leaving Brest for her destination on the 15th inst.; although a vessel of no speed, she is heavily armoured, and for her principal armament carries two 27-centimetre (10·8-inch) guns in a turret forward, and has in addition ten small Q.F. guns.

It is reported that Vice-Admiral Barrera will be appointed to the command of the Northern Squadron in October, hoisting his flag in the "Formidable," which will relieve the battle-ship "Hôche." It is stated that on his approaching voyage to Russia the President of the Republic will embark on board the armoured cruiser "Dupuy de Lôme," and will be escorted by the armoured cruiser "Pothuau," which recently attended the Naval Review at Spithead, and the third-class cruiser "Surcouf."

Rear-Admiral Pottier, in command of the Levant Division of the Active Squadron will keep his flag definitely in the first-class armoured cruiser "Amiral-Charner," where he has been flying it now for some weeks, and his staff have all been transferred from his former flag-ship, the second-class battle-ship "Dévastation."

A "projet de loi" for regulating the position of officers of the mercantile marine when called upon for active service has been submitted by the Minister of Marine. It is proposed that the officers of each mercantile cruiser requisitioned for service shall retain their position on board their ships, being granted naval rank and status during the war.

The French Naval Manœuvres began on the 5th inst., and will continue to the 30th inst. The Reservists will assemble on 5th July, and the *personel* of the semaphores will be doubled.

NORTHERN MANŒUVRES.

The forces taking part will be as follows :—

- (1) Northern Squadron, composed as follows :—
 - First-class battle-ship—"Hôche" (flag-ship of Vice-Admiral Parragon, commanding).
 - Coast-defence battle-ships—"Bouvines" (flag-ship of Rear-Admiral de Courthille, second-in-command), "Valmy," "Tréhouart," and "Jemmapes."
 - First-class armoured cruisers—"Bruix," "Dupuy de Lôme," "Amiral-Pothuau."
 - First-class battery—"Tage" and "Sfax."
 - Second-class cruiser—"Friant."
 - Torpedo-cruiser—"Épervier."
 - Torpedo-avisos—"Lance," "Salve."
 - Torpilleurs-de-haute-mer—"Ariel," "Mangini," "Aquilon."
- (2) Mobile defence of the four first arrondissements.

FIRST PERIOD.

The First Division will leave Brest on 7th July for one of the neighbouring bays, and the Second Division for the anchorage of St. Vaast.

The 7th, 8th, 9th, and 10th July will be employed in target practice, and various exercises and drills.

11th July the two divisions arrive respectively at Brest and Cherbourg to celebrate the National Fête, and complete provisions.

SECOND PERIOD

The divisions will proceed to sea, and, after gaining touch of each other by their scouts, will concentrate and proceed to the anchorage of Quiberon, where various drills and exercises will take place.

From 18th to 24th July manœuvres will take place at sea between the squadron on one side and "Sfax" and "Tage" on the other, representing an enemy's division.

THIRD PERIOD.

The squadron will cruise off Quiberon exercising tactical formations, and at torpedo attacks.

The manœuvres are to cease on 30th July.

MEDITERRANEAN.

The forces taking part in the manœuvres are :—

1. Active Mediterranean Squadron composed as follows :—

First Division—

First-class battle-ships—"Brennus" (flag-ship of Vice-Admiral C. de Cuverville, Commander-in-Chief); "Carnot"; "Jauréguiberry."

Second-class battle-ship—"Redoutable."

Repeating-ship for Commander-in-Chief—Torpedo-cruiser—"Faucon."

Second Division—

First-class battle-ships—"Magenta" (flag-ship of Rear-Admiral Dieulouard); "Neptune"; "Marceau."

Cruiser Divisions :—

First Division—

First-class cruiser—"Alger."

Third-class cruiser—"Linois."

Second Division—

Torpedo-cruiser—"Wattignies."

Torpedo-aviso—"D'Iberville."

Third Division—

Torpedo-aviso—"Casabianca."

Fourth Division—

Third-class cruiser—"Cosmao."

Torpedo-aviso—"Dragonne."

Torpedo-boat Division—

Torpedo-aviso—"Levrier" (Senior officer).

Torpilleurs-de-haute-mer—"Kabyle"; "Éclair"; "Forban"; "Sarrazin"; and one mobilised boat.

2. Reserve Mediterranean Squadron :—

First Division—

First-class battle-ships—"Amiral-Duperré" (bearing flag of Vice-Admiral Humann, Commander-in-Chief).

Second-class battle-ships—"Dévastation"; "Courbet."

Repeating-ship for Commander-in-Chief—Third-class cruiser "Milan."

Second Division—

Third-class battle-ship—"Friedland" (flag-ship of Rear-Admiral Godin).

Coast-defence battle-ships—"Indomptable"; "Terrible."

Torpedo-boat Division—"Orage"; "Flibustier"; "Aventurier"; and two mobilised boats.

3. Torpedo-boats of the mobile defences of the 5th Arrondissement and of Corsica, assisted by three sea-going torpedo-boats, to be mobilised.

1st PERIOD.

Active Squadron.—Weigh anchor on the 6th July, under command of Vice-Admiral de Cuverville, for various manœuvres at sea till 21st, spending the 12th to 15th in harbour at Toulon for the National Fête,

Reserve Squadron.—Manœuvres and exercises between the same dates off the coast of Corsica, to include coaling and re-victualling at sea, under the command of Vice-Admiral Humann.

2nd PERIOD.

Combined exercises, the Reserve Squadron representing an enemy, and the Active Squadron defending the litoral. On the morning of the 27th the two squadrons combine under the command of Vice-Admiral de Cuverville and carry out various exercises, such as getting under way both by day and night, anchoring together and mooring, etc. 30th, termination of manœuvres, discharge of reservists.—*Le Temps* and *Le Yacht*.

Much discontent exists at present among a certain class of naval critics with the management of the Dockyards, and the following remarks are a *précis* of an article which appeared lately in the *Revue des Deux Mondes* :—

“The ‘maritime prefectures’ are the basis of the system on which naval arsenals are conducted in France. This system dates in its essential points from the administration of Colbert, was set aside under the Revolution, and definitively re-established in 1826. The five chief ports have each a vice-admiral as prefect, who is not only head of the naval district, but of the departments which supply the *matériel*. He has under him a rear-admiral, in charge more particularly of the ships in ordinary, and also engineers and other officers in charge of naval construction of ordnance, of torpedoes, and hydraulic machinery respectively; lastly, a paymaster-general and inspector of hospitals. All these take their orders directly from the prefect, who, however, has no authority over squadrons or divisions which may put into the port.

“The proposals of those who wish to reform this system may be briefly summed up as follows :—Rochefort and Lorient, where ships seldom put in, to cease to be arsenals and become mere Government factories; the others to be constituted as now, but under a superior officer, who would be the mere deputy on land of the commander of the squadron on that station. There would thus be two admirals in entire charge both of the naval forces and the establishments on land—one for the Atlantic and the Channel, the other for the Mediterranean. They contend that the existing naval arsenals, with their elaborate staffs, absorb a very large portion of the naval estimates as compared with the ships in commission, which is plainly an anomaly. The remedy proposed is to reduce some of them to the condition of mere Government works, without any combatant or departmental staff, and to make those retained as arsenals mere adjuncts of the squadrons having their headquarters at the respective ports.

“As it is, there are in France five naval arsenals, three being on the Atlantic. Rochefort is some way from the sea on a shallow and winding river, difficult of access for the larger ships; while Lorient, with excellent slips, is almost deserted, the excellent harbour of Brest, its near neighbour, supplying all that ships want. Why not make Brest the only port for taking in supplies, leaving Lorient a building yard, and Rochefort merely a gun factory? The three other ports would then cease to be dockyards for building, only retaining such machinery as might be required for keeping in repair ships in commission or ordinary, thus admitting of expensive reductions in the staff. The apparent anomaly of the greater cost of production as compared with maintenance of ships afloat is in fact inevitable.

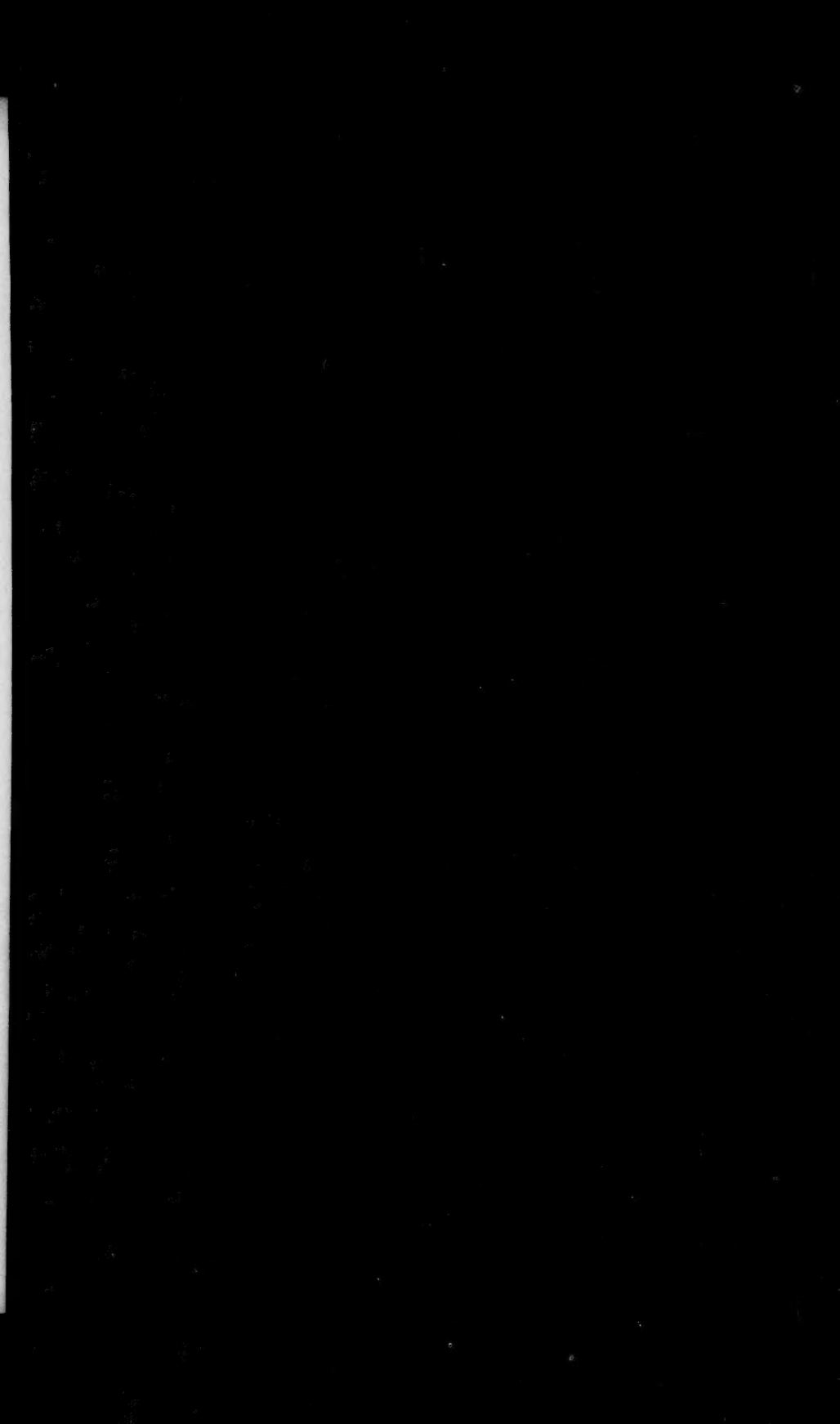
“On the other hand, in case of war, our ships would constantly, both in case of an encounter with the enemy and at other times, be wanting to put into harbour to refit or take in stores. What an advantage to have no less than three ports in the Gulf of Gascony where they can do this, thus forcing the enemy to divide his ships into three portions so as to watch them. Moreover, unless the engineer has constant practice on ships actually putting in from sea service, he will lose his skill in repairing damages, and in introducing improvements in construction. The alternative would be to transfer the *personnel* from port to

port, so as to learn all kinds of duties; but this would be very hard on the lower grades of the staff, unaccustomed to change for generations. Besides, if the existing plant were left unused for a time it would deteriorate to such an extent as would not compensate us for the saving in other respects.

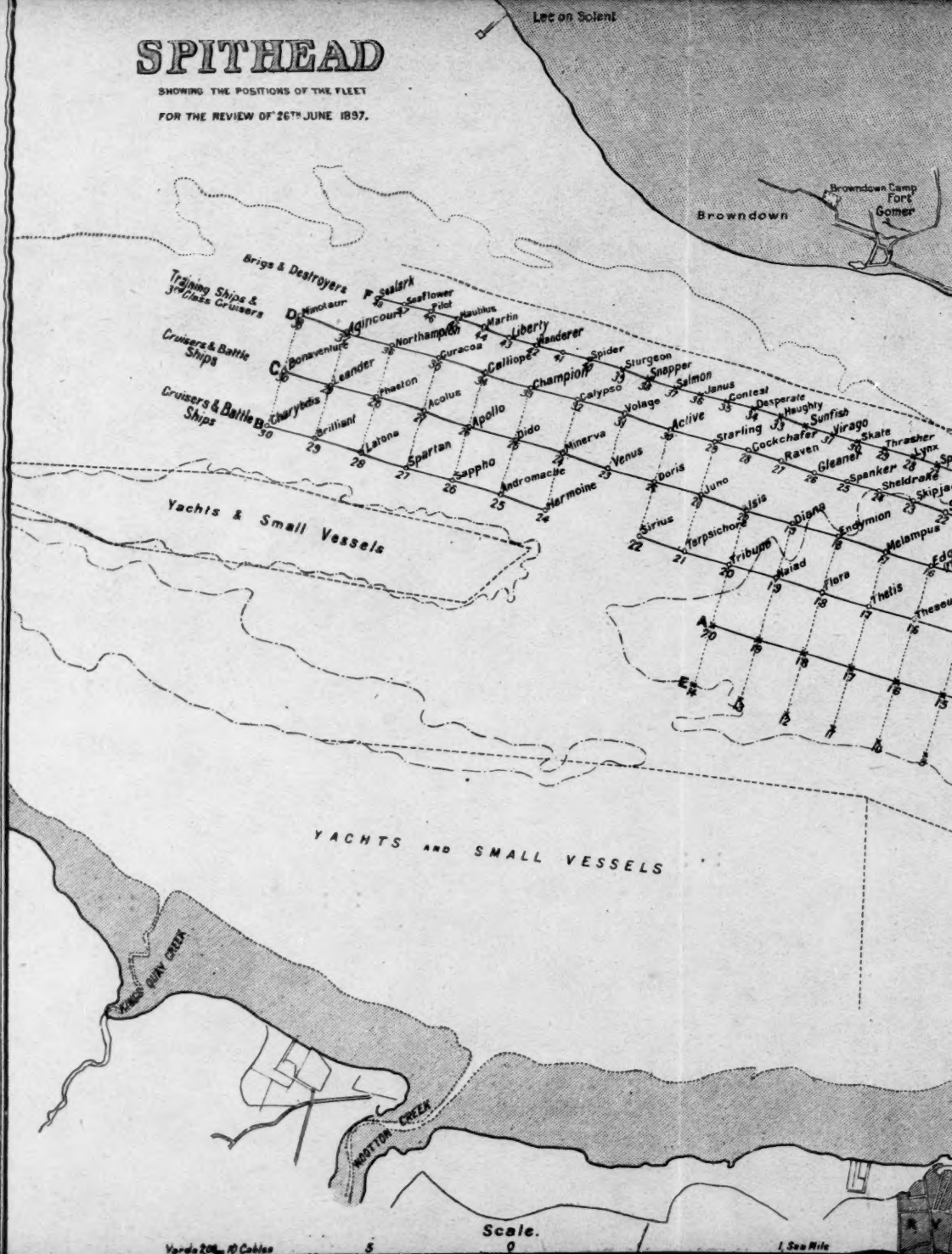
"To return to the question as to who is to be responsible for the efficiency of these ports, it seems at first sight reasonable enough that it should be the admirals commanding the respective squadrons. But the machinery of such arsenals is so complex that it cannot be reduced to the level of a mere accessory, and ships are birds of passage which never stay long at a naval station. How could an admiral in charge of a squadron find time or opportunity to watch over the daily-varying needs of such an arsenal? In war-time he could exercise no supervision whatever, and even in peace the subordinate in immediate charge would become to all intents and purposes a 'maritime prefect,' though without his authority and direct responsibility to the Minister of Marine. And still less would the admiral be able, or his deputy qualified, to exercise the semi-military functions of commander of the fortress protecting the naval base in question, functions which are nowadays more and more relegated to the maritime prefect.

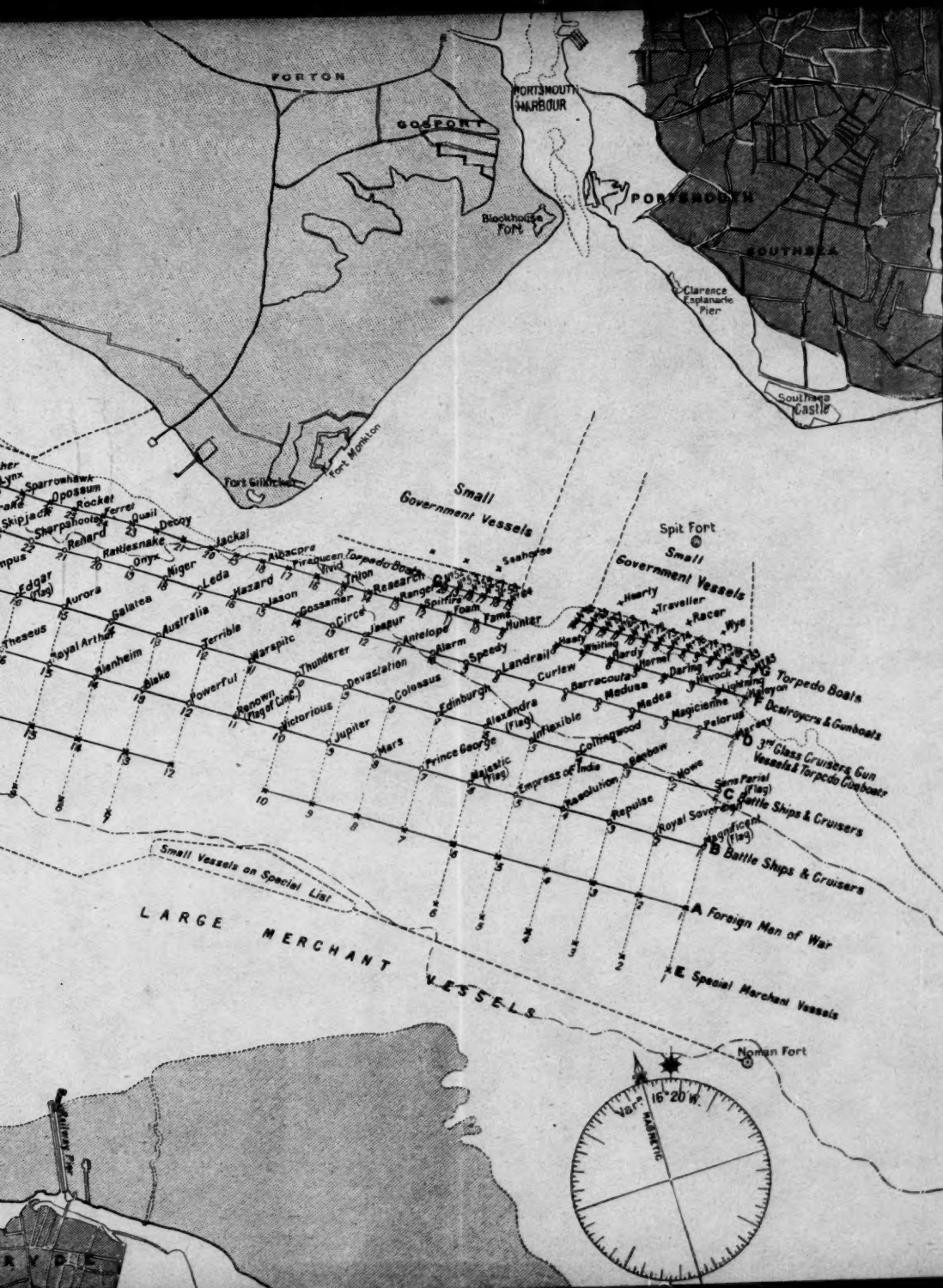
"As things now stand the principal function of the rear-admiral or deputy prefect are the care of the ships in the steam reserve, the first category of which is supposed to be ready for sea at forty-eight hours' notice. In war-time he would become the practical head of the arsenal. In the cases of Lorient and Rochefort, however, where the prefect is only a post-captain, this work falls to the share of a rear-admiral from the Reserve list, appointed on the outbreak of hostilities. This irregularity is most undesirable. The deputy has also charge of the munitions of war returned into store by ships put out of commission. It seems very likely that the staff, with their hands already full with the production of ships, will be apt to use such stores for the ships they are constructing, and not have them in readiness to serve out to the ships to be mobilised or those already in commission and in want of a fresh supply. It would, at any rate, seem wiser to trust the care of such stores to the combatant branch, *i.e.*, to the rear-admiral. This being so, he should also be made even in peace-time the nominal as well as the actual head of the arsenal. Lorient and Rochefort should be put on the same footing as the other ports, even at the risk of the further cost necessary to maintain a rear-admiral as chief of the staff, in place of a post-captain as now.

"Another question which has caused a good deal of heart-burning is that of the control of the Estimates. At present, contrary to the rule in all private works, the control of the finances is not in the hands of those responsible for the work done. But the work of an arsenal is so complete that it would scarcely be possible to allow of the heads of the several departments controlling separately the expenditure of those departments. The present system is based on the decree of the year VIII., in which we find, 'We have been led to look on a port as a vast building-yard for ships, the work of which must be regulated and distributed so as to give each man the share that he knows best how to do'; and further on, 'The advantages of this distribution are so patent in great works and factories that there is no need to dwell on them.' Has the desired result been attained? We think that it has, and that it is thanks to the supervision of the much decried 'maritime prefects' that it is so, they having relieved the experts under their orders of responsibility. There is always this difference between a Government and a private establishment that the latter has to be worked at a profit. It has been known for some time that the budget, while limiting the actual sum voted, has left the Minister of Marine absolutely free as to the quantity of material used. He may lay in a stock one year and use it in those succeeding, or draw on the surplus left by his predecessors. It has, therefore, been suggested that there should be a special supply staff, issuing stores only as requisitioned by the departments needing them, but controlled as to the nature



SHOWING THE POSITIONS OF THE FLEET
FOR THE REVIEW OF 26TH JUNE 1897.





and amount of the purchases by those departments. This would enable Parliament to check the actual expenditure as opposed to that shown in the Estimates. The price of the supplies issued would be expended in replacing them. The whole question is one of finance in reality, and should be settled by Parliament.

"We have endeavoured here to show that the administration of our naval arsenals by no means deserves the blame thrown upon it, while at the same time pointing out defects which do exist, and the manner in which we think it desirable they should be remedied."

RUSSIA.—The Navy has sustained a serious blow by the loss of the comparatively speaking new battle-ship "Gangut," which struck on a reef, not apparently marked on the charts, near the island of Rondoe, in the Björkoe Sound, off the rock-bound coast of the Gulf of Finland, between Helsingfors and Wiborg, at 4 p.m. on the 25th ult., and sank in deep water shortly afterwards, without however, fortunately, any loss of life. The ship had touched on a reef last year somewhere near the same spot, and other war-ships have of late years been lost and damaged in these waters, which would show that the outcry in the Press, which has arisen, for a new and careful survey of the whole coast can scarcely be called premature. It was in these waters that the monitor "Russalka" foundered in September, 1893, with all hands on board, and not a trace of her has ever been discovered. Two or three years previously the late Alexander III. and the Imperial family had a narrow escape while cruising among the Finnish islets in one of their yachts, which struck upon an unknown sunken rock not marked on the charts. The "Gangut" had on board, at the time of the accident, Vice-Admiral Tyrtoff, Commander of the Second Division of the Baltic Squadron, with all the members of the Gun Practice Commission and some 520 officers and men engaged in gun practice. The sharp rock on which she struck at four o'clock in the afternoon pierced the double bottom of the ship, and, in spite of the water-tight compartments, the water soon put out the fires and entered the engine-room. There was only just time to let off steam. Fortunately, however, the vessel did not sink until about six hours later, which gave time for several other ships of the Training Squadron to come to the rescue. All hands were saved, after the flag and the Holy Image had first been transferred to the cruiser "Africa." As the ironclad sank to the bottom all the crews of the surrounding vessels removed their caps as one man and made the sign of the Cross. The "Gangut" was laid down at the new Admiralty yard in 1888, and launched in 1890, and was of the following dimensions:—Length, 289 feet; beam, 62 feet; a displacement of 6,600 tons, with engines developing 8,300-I.H.P., with a nominal speed of 14·5 knots. Protection was afforded by a compound armour belt, 16 inches thick, extending some two-thirds the length of the ship, with a 2·5-inch armour deck. She carried one 12-inch gun in a turret forward, protected by 8-inch armour; four 9-inch in an 8-inch armoured redoubt, four 6-inch, and ten small Q.F. guns, with five torpedo-tubes.

MILITARY NOTES.

PRINCIPAL APPOINTMENTS AND PROMOTIONS DURING JUNE, 1897.

Major-General (temp. Lieut.-General) Sir R. Grant, K.C.B., R.E., Inspector-General of Fortifications, to be Lieut.-General; Colonels N. F. Parker, Indian Army, A. D. Anderson, R.A. (late Bengal), C. J. Moysey, C.M.G., half-pay, and G. Salis-Schwabe (temporary Major-General) commanding the troops, Mauritius, to be Major-Generals; Major-General Sir Francis W. Grenfell, K.C.B., G.C.M.G.,

from Inspector-General of Auxiliary Forces and Recruiting, to command the British force in Egypt; Major-General T. Kelly-Kenny, C.B., *p.s.c.*, from 3rd Infantry Brigade, Aldershot, to be Inspector-General of Auxiliary Forces and Recruiting; Colonel (Brigadier-General, Bombay) W. F. Gatacre, C.B., D.S.O., *p.s.c.*, to be a Major-General on the Staff to command the 3rd Infantry Brigade at Aldershot; Brevet-Colonel M. Churchill, half-pay, to command the 27th Regimental District; Brevet-Colonel W. F. de H. Curtis, half-pay, R.A., to be a Colonel on the Staff R.A. in India, with the temporary rank of Brigadier-General; Brevet-Colonel J. H. S. Craigie, half-pay, to be A.A.G. in India.

The following are amongst the honours conferred in connection with the Jubilee of Her Majesty Queen Victoria:—General A. B. Stransham, K.C.B., Royal Marines; Lieut.-General (local General) Sir George S. White, G.C.I.E., K.C.B., V.C.; and Major-General and Hon. Lieut.-General Sir H. M. Havelock-Allan, Bart., K.C.B., V.C., to be G.C.B. General H.R.H. The Duke of Connaught, K.G., &c., to be Colonel-in-Chief of the 6th (Inniskilling) Dragoons; General H.H. Prince W. A. Edward of Saxe-Weimer, K.P., to be Field-Marshal; General H.R.H. Prince Christian of Schleswig-Holstein, K.G., to be personal A.D.C. to the Queen. The following were appointed Aides-de-Camp to the Queen:—Colonels W. G. Wood-Martin, Duke of Connaught's Own Sligo Artillery; C. B. Bashford, 3rd Bn. Middlesex Regiment; the Duke of Montrose, K.T., 3rd Bn. Argyll and Sutherland Highlanders; the Earl of Clarendon, Herts Yeomanry; the Earl of Harewood, Yorkshire Hussars Yeomanry; Viscount Galway, Notts (Sherwood Rangers) Yeomanry; the Marquis of Londonderry, K.G., 2nd Durham Volunteer Artillery; and the Earl Brownlow, Home Counties Volunteer Brigade.

The following is a summary of the troops under arms in the metropolis of London on the occasion of the celebration of Her Majesty's Jubilee, on Tuesday, 22nd June, 1897. General H.R.H. the Duke of Connaught, K.G., etc., was in chief command, with Major-General Lord Methuen, C.B., C.M.G., commanding the Home District, as chief Staff officer:—

	All ranks.	Troop horses.	Guns.	Waggons.
Cavalry	4,524	4,265	—	—
Royal Artillery	2,316	1,603	110	44
Royal Engineers	603	—	—	—
Infantry	18,284	—	—	—
Army Service Corps	184	—	—	—
Medical Staff Corps	257	—	—	—
Army Ordnance Corps	164	—	—	—
Honourable Artillery Co....	138	—	—	—
Militia	5,249	—	—	—
Yeomanry Cavalry	502	485	—	—
Volunteers	10,735	—	—	—
Cadet Battalions	232	—	—	—
Local Forces in Colonies...	141	—	—	—
Indian Forces	41	—	—	—
Colonial Forces	933	—	—	—
Total	44,303	6,333	110	44

To the above must be added the Cadets of the Royal Military Academy and Royal Military College, Sandhurst; and also the band of the Royal Artillery and of Kneller Hall, taking part in the service at St. Paul's Cathedral.

Her Majesty's Indian Forces consisted of two European and twenty-two Native officers of Native cavalry corps detailed to serve as a Guard of Honour for the Queen-Empress of India. They were drawn from the Bengal, Bombay, Punjab, and Madras commands, and the Hyderabad contingent. Seventeen

Native officers representing the Imperial Service troops of Kaskmir, Patiala, Jind, Gwalior, Bhopal, etc., were also present.

The local Colonial military forces consisted of 141 of all ranks representing the Hong Kong Artillery, Singapore Artillery, Ceylon Artillery, Mauritius Artillery, Jamaica Artillery, St. Lucia Artillery, Sierra Leone Artillery, Bermuda Artillery, Royal Malta Artillery, Hong Kong Submarine Mining Company, R.E., Singapore Submarine Mining Company, R.E., Ceylon Submarine Mining Company, R.E., Mauritius Submarine Mining Company, R.E., Jamaica Submarine Mining Company, R.E., Royal Malta Militia Submarine Mining Company, R.E., West India Fortress Company (Jamaica), R.E., West India Regiment (1st Battalion), West India Regiment (2nd Battalion), Hong Kong Regiment, Royal Malta Regiment of Militia, and the Bermuda Rifle Volunteer Corps.

The other troops from Her Majesty's Colonies, Dependencies, and Possessions consisted of 420 of all ranks, representing the following mounted troops:—Canada Cavalry and Field Artillery, Cape Mounted Rifles, Cape Mounted Infantry, Cyprus Mounted Police, Natal Mounted Volunteers, New South Wales Lancers, New South Wales Mounted Rifles, New Zealand, Queensland, Rhodesian Police, South Australia, Trinidad Yeomanry, Victoria Mounted Rifles; and 513 infantry:—Borneo (Dyak Police), British Guiana Constabulary, Canada Artillery and Infantry, Ceylon Artillery and Infantry, Gold Coast Constabulary, Hong Kong (European Police, Chinese Police, and Sikhs), Jamaica Militia, Lagos Hausa Constabulary, Natal, New South Wales Permanent Forces, Sierra Leone Frontier Police, Straits Settlements (States Guides, Sikh Police, and Malay Police), Victoria Rifles, Western Artillery and Infantry, Trinidad Artillery, Infantry, and Constabulary, Royal Niger Company (Hausas), and Niger Coast Protectorate.

One of those startling outbreaks which occur from time to time on the North-West frontier of India was reported on the 10th June from the Tochi Valley. Three British officers, twenty-two men of the native ranks, and two followers were killed, while three other British officers and twenty-four men were wounded. The three officers killed were Colonel A. C. Bunny, 1st Sikhs, Captain J. F. Browne, R.A., and Lieutenant H. A. Cruickshank, R.A., both of No. 6 Bombay Mountain Battery, while the wounded were Lieutenant A. J. M. Higginson and Surgeon-Captain C. C. Cassidy (since dead), of the 1st Sikhs, and Lieutenant C. L. Seton Browne, 1st Punjab Infantry. Judging from the casualties, the British officers would appear to have been the first to be attacked, for all six were killed or wounded. The losses among the native troops were distributed as follows:—1st Punjab Cavalry, 2 sowars wounded; No. 6 Bombay Mountain Battery, 2 killed, 3 wounded; 1st Sikhs, 12 killed, 13 wounded; 1st Punjab Infantry, 8 killed, 6 wounded; 2 followers were also killed, and one was wounded. The Mountain Battery had four mules killed and five wounded, but the guns were, it is supposed, brought safely into Datta Khel, as no mention is made of their being lost. Nineteen commissariat mules were lost, while the cavalry detachment had three horses killed.

It appears that Mr. Gee, Political Officer in the Tochi Valley, left Detta Khel with an escort of 300 men of the 1st Sikh Infantry and 1st Punjab Infantry, two guns of No. 6 Mounted Battery, and twelve sowars of the 1st Punjab Cavalry. Colonel Bunny, commanding the Tochi column, was in charge of the escort. The object in view was to fix a sight for a new outpost at Sheranni, nine miles beyond Detta Khel, and also to realise a fine which was imposed upon the local tribesmen some months ago. The party arrived at Maizar, which is somewhat to the south of Sheranni, on the morning of the 10th June, and there halted, nothing having occurred on the road from Detta Khel to excite suspicion regarding the attitude of the tribesmen.

The political officer was met at Maizar by Sadda Khan, Malik of Sheranni,

and the local headsmen, whose bearing was quite friendly. The troops were halted near the village, and the political officer, with only the cavalry detachment (twelve sabres) proceeded to Datoi, a few miles away, accompanied by some of the Malikis. The visit was an uneventful one, and the party returned to Maizar. Sadda Khan had meanwhile provided food for all the British officers, and also for the Mussulman sepoys in the escort. This was partaken of, and such a show of hospitality threw the party off their guard, as even among the Pathans the lives of guests are usually held sacred for the time being. At two o'clock, just as the officers had finished their meal, fire was opened upon them from the village towers, and all six were shot down almost at once. At the same time a continuous fire from all sides was directed against the sepoys, some five hundred tribesmen joining in the attack. The position was apparently unsuitable for defence, and the troops began to retire over the hills in the direction of Sherrani. The number of their assailants rapidly increased, and it is calculated that a thousand men were engaged in the pursuit before the river bank was reached opposite Sheranni. The details of the retirement have not yet been received, as the surviving military officers were wounded, but it is clearly established that the tribesmen had planned the attack beforehand, as fresh parties appeared from the hills between Sheranni and Datta Khel. Captain H. A. Cooper, 1st Sikhs, was in command at Datta Khel, and the first news he received was at five o'clock, when a sowar arrived, who stated that the troops had been attacked, their British officers killed or wounded, and that their ammunition was running short. Captain Cooper ordered out two companies of infantry with a fresh supply of ammunition, and sent with them the only two British officers who, with himself, had been left at Datta Khel. These reinforcements enabled the retirement to be completed, the tribesmen desisting from the pursuit and not venturing near the post. The troops did not reach Datta Khel until eleven o'clock at night. Their march was necessarily a slow one, as a running fight had to be maintained for four miles, and they were encumbered with their dead and wounded. Nine rifles only were lost, which speaks well for the sepoys. The Waziris are reported to have lost ninety killed and a considerable number wounded. Among the former were four mullahs and a malik. The fanaticism of the Mada Khel had doubtless been excited by the local mullahs, and a party of men must have been told off to shoot the British officers when a favourable opportunity afforded. Lieut.-Colonel Bunny was an officer of great experience on the frontier, and generally cautious in his dealings with the tribesmen, but he must have been deceived by Sadda Khan's hospitality.

The tribesmen concerned in the affair are said to belong to the Mada Khel sub-section of the Darwesh Khel Waziris. They hold the country at the western end of the Dawar Valley, through which the Tochi river runs. The Darwesh Khel Waziris have hitherto behaved extremely well, and as portions of the tribe dwell in British territory it was not expected that they would give trouble. During Sir William Lockhart's expedition against the Mahsud Waziris they showed no disposition to join with their fellow tribesmen. It has yet to be discovered why the men of the Mada Khel should so suddenly have committed themselves. Their punishment will have to be an exemplary one, and an expedition has already been decided upon. Major-General G. C. Bird, C.B., Indian Staff Corps, commanding at Oudh, has been selected for the command, and the following is the detail of the Force:—

1st Brigade.—(Brigadier-General commanding, C. C. Egerton, C.B., D.S.O., Indian Staff Corps.)—2nd Battalion Argyll and Sutherland Highlanders, 1st Sikh Infantry, 1st Punjab Infantry, 33rd Bengal Native Infantry, Squadron 1st Punjab Cavalry, No. 3 (Peshawur) Mountain Battery, and No. 2 Company of Bengal Sappers and Miners.

2nd Brigade.—(Brigadier-General commanding, W. P. Symons, C.B.)—3rd Battalion The Rifle Brigade, 6th Bengal Native Infantry, 14th Bengal Native

Infantry, 25th Bengal Native Infantry, Squadron 1st Punjab Cavalry, four guns No. 6 (Bombay) Mountain Battery.

The following is a copy of the warrant of King James II., dated 3rd August, 1685, kindly lent by the Earl of Dartmouth, for settling the precedence of the regiments of foot :—

“ James R.

“ For the Preventing of all Questions and Disputes that might arise for or concerning the Ranks of the Several Regiments and Companies of Foot which Now or at any time hereafter shall be employed in Our Service, and of the several Officers and Commanders of the same, as well upon Service and in the Field as in all Councils of Warr and other Military Occasions where they are called to appear in their respective Qualities, We Have thought fit to issue out these following Rules and Directions, viz. :—

“ That our First Regiment of Foot Guards take Place of all other Regiments of Foot, and that the Colonel be always reckoned and take Place as the First Foot Colonel ; That Our Regiment of Foot Guards called the Coldstreamers take Place next ; after which Our Royal Regiment ; Our Dearest Sister the Queen Dowager's Regiment ; The Regiment of Prince George, Hereditary Prince of Denmark ; Our Holland Regiment ; Our Dearest Consort, the Queen's Regiment ; Our Royall Regiment of Fusiliers ; Our most Dear and most Intirely Beloved Daughter The Princess Ann of Denmark's Regiment ; Our Regiment under the Command of Our Trusty and Welbeloved Henry Cornwall, Esqr. ; Our Regiment under the Command of Our Right Trusty and Right Welbeloved Cousin and Councillor John, Earl of Bath ; Our Regiment under the Command of Our Right Trusty and Right Intirely Beloved Cousin and Councillor, Henry, Duke of Beaufort ; Our Regiment under the Command of Our Right Trusty and Right Intirely Beloved Cousin, Henry, Duke of Norfolk ; Our Regiment under the Command of Our Right Trusty and Right welbeloved Cousin and Councillor, Theophilus, Earl of Huntingdon ; Our Regiment under the Command of our Trusty and welbeloved Sr Edward Hales, Barrt. ; and Our Regiment under the Command of Our Trusty & welbeloved Sr William Clifton, Barrt., are to have Precedency as they are here ranked ; And all other Regiments of Foot to take Place according to their respective Seniorities from the time they were Raised, so that No Regiment is to loose its Precedency by the Death of their Colonel ; and all Captanes are to take Place within their Respective Regiments according to the Dates of their Commissions.

“ And it is Our further Will and Pleasure That these Our Orders be signified to the Colonels of our Several Regiments of Foot and Governors of Our Guarrisons, to be by them Communicated to the respective Officers under their Command.

“ Given at Our Court at Whitehall, the Third day of August, 1685, in the First Year of Our Reign.

“ To the Colonels of Our Several Regiments of Foot in Our Pay and Entertainment, and to the Governors of Our Guarrisons, and to the Officers in Chief Commanding any of our Forces or Guarrisons.

“ By His Majesty's Command,

“ WILLIAM BLATHWAYT.”

The following special Army Order, dated 18th June, 1897, has been issued :—

1. The Queen having been pleased to approve the details of the Regimental Establishments for the Regular Army, the Honourable Artillery Company, the Militia, the Yeomanry Cavalry, and the Volunteers, copies will be issued to all concerned.

2. These establishments will take effect generally from the 1st April, 1897, but in the case of the cavalry of the line they cannot take full effect until after the embarkation of the drafts for India during the trooping season of 1897-98, and the

consequent abolition of the Cavalry Dépôt at Canterbury. Meanwhile, the cavalry establishments for 1896-97 will remain in force, except that in the case of non-commissioned officers, the lesser of the two establishments (1896-97 and 1897-98) will be regarded as the fixed establishment, beyond which no promotion may be made without first obtaining War Office authority. The establishments now assigned to the 1st Bn. Suffolk Regiment and the 1st Bn. Royal Irish Rifles take effect respectively from the 10th and 24th April, 1897. The 2nd Bn. Royal Dublin Fusiliers will be placed on the ordinary colonial establishment on its arrival in South Africa.

3. Should a unit of cavalry, infantry, or Royal Artillery return home from service abroad before the issue of revised establishment tables, it will, from the date of arrival home, be placed on the ordinary minimum home establishment.

4. When reliefs are effected between companies of garrison artillery on the Imperial establishment, a company will, on arrival at its new station, provisionally take the establishment previously assigned to the company which it relieves.

5. On a battalion of infantry which is serving abroad being placed under orders to return home, vacancies that may occur in the ranks of subaltern and sergeant will not be filled up if any reduction of establishment has to be effected on arrival of the battalion at home. A similar rule will be observed in regard to the captains, subalterns, and non-commissioned officers of any cavalry regiment about to return from India.

6. In the regiments of foot guards, and in infantry territorial regiments, second lieutenants may be posted to either battalion, or to the dépôt, in lieu of a similar number of lieutenants, provided that the proportion of the two ranks fixed for the whole regiment is not thereby exceeded.

7. In the case of a territorial regiment both of whose battalions are serving, or are about to serve, abroad, and whose dépôt has therefore a special establishment, the extra officers included in the dépôt establishment will be officers temporarily employed from the Militia, and the special dépôt establishment will cease to have effect if either battalion returns home.

8. An establishment of horses for regimental transport will be allotted to battalions of foot guards and infantry of the line at home and be interchangeable, according as battalions vacate or come into the barracks at which the sets of regimental transport are permanently located. The number of horses per battalion will be three or five, according to the station. In Egypt each battalion will have sixteen horses for regimental transport. The dépôt, Gloucestershire Regiment, will have two horses.

9. The number of horses for the mounted infantry in South Africa and units serving abroad may vary according to circumstances.

Regulations respecting the Staff College, 1897, containing several amendments in the Regulations of 1894, have been issued with Army Orders, dated 1st June, 1897.

The Queen has approved of a medal being granted by the British South Africa Company to all officers, non-commissioned officers, and men of the Regular and other forces who were employed in the operations in the provinces of Matabeleland and Mashonaland, known as Southern Rhodesia, between the 24th of March and the 31st of December, 1896. The medal will be of the same design as that issued for the operations in Matabeleland in 1893, but will bear the inscription "Rhodesia, 1896." Those eligible who already possess the 1893 medal will receive a clasp only. The grant of the medal or clasp to Regular officers will be limited to those who had official sanction to be present; and the medal will be worn on the left breast when in uniform.

AUSTRIA-HUNGARY.—Autumn manoeuvres will be held this year in presence of the Emperor, whose headquarters will be at Bistritz. The 1st, Cracow, Army

Corps and the 2nd, Vienna, will be engaged. At the close of these manoeuvres the Emperor will proceed, on board his yacht "Miramar," to South Dalmatia, to observe the combined manoeuvres of the squadron and the 94th and 96th Infantry Brigades.¹—*Militär-Wochenblatt*.

According to the latest orders, the following arrangements hold good for the oversight and inspection of military places of education: the War Minister has the general supervision, as a matter of course; the Inspector-General of Military Education and Educational Institutions, inspects, every year, the academies, practical schools, and the institute for the orphans of officers; the other institutions he inspects once in three years. The inspection of the cadet schools is entrusted to the army corps commanders, but other authorities are entitled, after due arrangement with the school commandants, also to inspect, as for instance, the heads of the chaplains' and sanitary departments.—*Militär-Wochenblatt*.

The strength of the Hungarian Landwehr Cavalry was, on the 1st of May, increased by one brigade with headquarters at Debreczen. This brigade, which is numbered *four*, is composed of the 2nd, 5th, and 9th Regiments of Hungarian Landwehr Hussars.—*Revue du Cercle Militaire*.

BOSNIA.—The Bosnian troops will be augmented by four new companies, which are to be called into existence in the approaching autumn. Each company will belong to the cadre dépôt, on a peace footing, and will form part of the fourth battalion.—*Revue du Cercle Militaire*.

FRANCE.—The 1st and 2nd Army Corps, of Lille and Amiens respectively, will take part in the grand manoeuvres in the North of France this year. On the 23rd August the Reserves called out to join in the operations of the corps will begin their march, which will end on the 3rd September with a divisional drill. On the 4th the infantry will rest, and the advanced bodies of cavalry will get into touch with the enemy. Army corps will work against army corps from the 5th to the 7th. The 8th will be a rest day. From the 9th to the 12th, inclusive, the whole will manoeuvre, as an army, under General de France, and will then rest on the 13th. The President of the Republic will, on the 14th, hold a review of the troops, between 70,000 and 80,000 strong, at St. Quentin, and they will begin, on the 15th, to return to their garrisons.—*Militär-Wochenblatt*.

Various writers have been expressing their views on the limit which should be set to the reduction of calibre in a military rifle. The facts on which their arguments are based were gathered from several recent battle-fields, as, for instance, those of Dahomey, the Niger, Chitral, and Abyssinia. The balance of opinion seems to be in favour of making no further reduction of the bore, for although great results have been obtained by small-bore rifles, they cannot be depended on to stop an adversary. So many casualties have occurred in consequence of this that they are styled *les fusils qui ne tuent pas*, and it has become a question for the authorities to fix on the best practical calibre for the army rifle.—*Revue du Cercle Militaire*.

The War Budget for 1898 amounts to 620,551,397 francs, or 7,000,000 francs more than last year. The effective for next year will consist of 28,409 officers and 561,141 men of the active Army, 742 officers and 25,121 men of the gendarmery, and 142,038 horses. The increase of officers is greatly due to the formation of fourth battalions in forty regiments. The additional 12,542 men, as compared with last budget, is owing to the progressive increase in the various branches of the Service. The 240 horses more than last year are accounted for by the intended formation of two new troops of Spahis on the Sahara, and by the requirements of

¹ These manoeuvres have been countermanded.

the new fourth battalions. Some extra expense is also entailed by the formation of three new schools of musketry, which are pronounced absolutely necessary for the proper instruction of the Army.—*Revue du Cercle Militaire*.

The President of the Republic recently received from the War Minister a very satisfactory report on the health of the Army, the death rate in 1896 having been only from 10 to 11 per 1,000. One of the causes of this improvement is that the drinking-water supplied to the troops has been filtered and disinfected more generally than ever before. The consequence is that typhus fever has been almost stamped out. Similar progress has been made in the treatment of small-pox, and diphtheria has, owing to the measures proposed by M. Pasteur, been reduced from 64 in 1893 to 22 in 1896. Scarlet fever and other diseases have been frequent, and the medical staff would gladly increase their means of dealing with these diseases if the money for the purpose was placed at their disposal.—*Militär-Wochenblatt*.

The Ministers of War and Agriculture have arranged measures for the improved working of the breeding establishments and the remount purchasing officers. They have appointed six commissions of six members each, the members being drawn, in equal numbers, from the two departments. The commissions meet at least twice a year, respectively, at Caen, Nantes, Bourges, Montpellier, Agen, and Châlons sur Marne, under the presidency of the several departmental prefects. The duty of the commissions is to advise, but not to order. The president of each commission sends the report of the proceedings to the Ministers of War and Agriculture and to the superior stud council. The last-named body has to express its opinion on the views of the commission.—*Bulletin Officiel du Ministère de la Guerre*.

The Algerian manœuvres will be held under the following arrangements. The Division of Algiers and that of Constantine will each furnish a mixed brigade. The Constantine mixed brigade, after having drilled independently, will concentrate at Sidi-Aïch, and its cavalry at Akbou, in order to operate against the other mixed brigade in accordance with the following idea:—

“An enemy has landed at Bougie, and is in possession of the place.

“A mixed brigade, composed of 6 battalions, 5 squadrons, and 2 batteries, is detached from the force that has landed, with instructions to cut the railway between Algiers and Constantine, and intercept communication between the two divisions.

“The mixed brigade furnished by the Algiers Division will unite at Maillot-Beni-Mansour to oppose the attempts of the enemy.”

The strength of each brigade will be about 7,000 and 200 officers. The review will take place in the neighbourhood of El Kœur.—*Avenir Militaire*.

GERMANY.—The School of Artificers, the object of which is to turn out artificers for the artillery of the Army and Navy, has been entirely re-organised. The first condition to be fulfilled by men and under-officers of the artillery who wish to enter that institution is that they must engage for at least three years' service, and they should have also passed the special regimental and brigade schools—or if marines, their divisional school. The first course in the school lasts for a year and finishes with the chief artificer's first examination. Those who pass must then go to an arsenal for two years, which qualifies them to be admitted to the school of artificers for a second course lasting six months, at the close of which there is a final examination for the grades of chief and officer artificer. The organisation of the institution is military, the members being divided into two companies and a detachment of marines. The students number 180, divided into nine instructional sections, the whole messing and living in barracks. The Bavarians have a similar establishment.—*Revue du Cercle Militaire*.

We are able to communicate the following details of the approaching Imperial Manœuvres:—The army composed of the two Bavarian Army Corps, made up of five divisions, will be commanded by Colonel-General of Cavalry Prince Leopold of Bavaria. The army of the same strength composed of the 8th and 10th Prussian Army Corps, will be commanded by General of Cavalry Count von Haeseler, the commander of the 16th Army Corps. In these manœuvres detachments of cyclists will be employed on a larger scale than ever before, not only as express riders but also as combatants. The German cyclists carry rifles instead of revolvers. The preparatory parades for the grand manœuvres will be for the 8th Prussian Army Corps, the 30th August, at Coblenz; for the 2nd Bavarian Army Corps, the 1st September, at Bielried; for the 1st Bavarian Army Corps, the 2nd September, at Nuremberg; and for the 11th Prussian Army Corps, the 4th September, at Homburg.—*Revue du Cercle Militaire.*

ITALY.—The manœuvres of the 2nd Army Corps this year will be attended by all the troops in the district (Alexandria) except the 12th Regiment of Cavalry and the 2nd of Engineers. They will be divided into two periods. During the first, from the 10th to the 15th September, the troops will be handed over to the general commanding the 3rd and 4th divisions. During the second period, from the 16th to 21st September, the divisions will be opposed to each other, and afterwards combined to march against an enemy represented by the Alpine battalions and the mountain batteries stationed in the district. The cavalry regiments of the army corps will perform separate exercises during the first period, and from the 16th to 21st September will be attached to the 3rd and 4th Divisions. The same army corps will carry out skeleton siege operations at the end of August, and skeleton cavalry manœuvres in the latter half of October. For the latter exercises the initial situation is to be that which existed between the Austro-Sardinians and the French in 1796.—*Revue du Cercle Militaire.*

The inquiry on the battle of Adowa has been decided upon by the Government, in order that light may be thrown on the manner in which the troops were led. The War Minister has ordered a commission to interrogate Major-Generals Albertone and Ellena, and Colonel Valenzano. The commission is composed of Lieut.-Generals Driguet, Salletta, and Adami. It may be remembered that at the battle of Adowa General Albertone commanded the left column composed of three-and-a-half batteries of mountain and artillery, four native battalions, and some irregulars. Ellena's brigade composed of seven Italian battalions, one native battalion, and two quick-firing batteries, formed the reserve at the beginning of the action. Colonel Valenzano was chief of the staff.—*Revue du Cercle Militaire.*

RUSSIA.—The census of 1897 has been completed. In a list of twenty-two governments the aggregate population is given as 57,727,582, as against 48,739,202, which was the return in 1885. For the whole of European Russia the figures are 94,188,750. To this must be added the following:—

Poland	9,442,590
Caucasus	9,723,553
Siberia	5,313,680
Steppes	3,415,174
Turkestan and Transcaspia	4,175,101
Finland	2,527,801
Khiva and Bokhara	6,412
Exterior parts of the Empire	34,604,311
European Russia	94,188,750
Total population	128,793,061

—*Revue du Cercle Militaire.*

SWITZERLAND.—For the year 1897 there have been 18,680 young men recruited for the Service. Among these were 14,738 who were born in 1877, 20 younger, and 3,922 older. They were distributed as follows:—15,206 to the infantry, 557 to the cavalry, 344 to the field batteries, 510 to the train, 120 to the mountain artillery, 221 to the fortress artillery, 245 to the artillery of position, 446 to the transport, 262 to the sappers, 68 to the pontoon companies, 81 to the pioneers, 479 to the sanitary corps, and 141 to the departmental troops. The supply of recruits has steadily increased. In 1889 there were 14,837; in 1895, 17,047; and in the last ten years a total of 163,794 has been reached.—*Militär-Wochenblatt.*

NAVAL AND MILITARY CALENDAR.

JUNE, 1897.

- 1st (T). Bechuanaland Native Reserves Bill read a second time in the Cape Assembly.
- „ „ Preparations made for a further advance of the Egyptian Army in August.
- „ „ An Egyptian mounted patrol encountered and drove back a party of Dervishes at Salamat, sixty miles N. of Dongola.
- 3rd (Th). Armistice on sea and land signed by the Turkish and Greek delegates.
- „ „ Italian Army Re-organisation Bill passed the Chamber.
- 5th (Sat). H.M.S. "Satelite" arrived at Plymouth from the Pacific station.
- 6th (S). H.M.S. "Royal Arthur" arrived at Plymouth from Australia with relieved crew of "Katoomba."
- 10th (Th). Bechuanaland Native Reserves Bill read a third time in the Cape Assembly.
- „ „ Treacherous attack on British troops in the Tochi Valley by Waziris.
- 11th (F). H.R.H. the Duke of Connaught inspected the Colonial contingent at Chelsea Barracks.
- „ „ Sir G. Taubman-Goldie's despatch on the operations in the Niger Soudan published by the War Office.
- 12th (Sat). Presentation of new colours to the Duke of York's Royal Military School by H.R.H. the Duchess of York.
- 13th (S). Demonstration in Brussels in favour of the re-organisation of the Belgian Army.
- 16th (W). Treaty signed for the annexation of Hawaii to the United States.
- „ „ British Mission to King Menelik returned to Aden from Abyssinia, having been treated with the highest honours.
- „ „ Rebel chief Galishwe escaped from Langeberg to the North.
- 17th (Th). Indian Government decided to send a Punitive Expedition to Tochi Valley.
- 19th (Sat). Military Torchlight Tattoo at Windsor in honour of the Diamond Jubilee.
- 20th (S). Accession Day of Queen Victoria, 1837.
- 22nd (Tu). Celebration of Queen Victoria's Diamond Jubilee.
- 24th (Th). Russian battle-ship "Gangut" struck on rock in Björkoe Sound in the Gulf of Finland, and sank shortly afterwards in 15 fathoms.
- 26th (Sat). Royal Naval Review at Spithead in honour of Queen Victoria's Jubilee.
- 27th (S). Italian Senate passed the Army Organisation Amendment Bill, and an Extraordinary Credit of 7,000,000 lire for the Navy.
- 30th (W). Colonial contingent visited Portsmouth Dockyard and H.M. Ships at Spithead.

FOREIGN PERIODICALS.

NAVAL.

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AUSTRIA-HUNGARY.—*Mittheilungen aus dem Gebiete des Seewesens*. No. 7. Pola and Vienna : July, 1897.—“The French Naval Manœuvres of 1896.” “On the Dip of the Horizon Observations for the Calculation of Refraction-Coefficients.” “On the Construction and Method of Working of Ships’ Boilers.” “The English first-class battle-ship ‘Majestic’ and the ‘St. George’ class of Cruiser.” “The German Naval Estimates for 1897-98.” “The Niclausse Water-tube Boilers on board the Spanish cruiser ‘Christobol Colon.’” “Book Notices.”

DENMARK.—*Tidskrift for Søvesen*. Copenhagen : No. 3. 1897.—“On Modern Naval Guns” (*concluded*). “Biological Researches and their Importance for Sea-Fisheries.”

FRANCE.—*Revue Maritime*. Paris : April, 1897.—“Reports Received from Madagascar by the ‘Duguay-Trouin.’” “Aerial Currents : their Course and their Use for Balloonists” (*continued*). “Study on Budget Specialities.” “Value of Ships-of-War from a Gunnery Point of View” (*continued*). “Projects for the Increase of the Japanese Naval and Military Forces.” “Maxim Smokeless Powder.” “The Production of Petroleum and the Necessities of Navigation in the Future.” “Trials of a 6-inch hardened Steel Plate at Dillingen.” “The Maritime Fisheries.” May, 1897.—“The Feeding of Boilers.” “Aerial Currents : their Course and their Use for Balloonists” (*continued*). “Oceanography in France.” “Value of Ships of War from a Gunnery Point of View” (*concluded*). “Trials of the Dürr Boiler.” “Petroleum Fuel and its Use in the Russian Navy.” “A Method for Minimising the Dangers arising from Collision at Sea.”

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Le Moniteur de la Flotte. Paris : 5th June, 1897.—“The Insurance for Fishermen and Seamen.” “The Navy in Parliament.” “The Flotilla of the Upper Congo.” “The New Regulations for the *Inscription Maritime*.” 12th June.—“Enough of Equivocation.” “The Navy in Parliament.” “Manœuvres of the Squadron of the North.” “The Semaphore Signalmen.” 19th June.—“The Points d’appui.” “The Navy in Parliament.” “Colonial Notes.” 26th June.—“The English Navy.” “The Navy in Parliament.” “The Mercantile Marine :—“Mutual Insurance for Seamen.” “The Fisheries and Ostriculture.”

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ITALY.—*Rivista Marittima.* Rome: June, 1897.—“Notes on the Employment of Torpedo-boats.” “Blechynden Water-tube Boilers.” “The Maritime Laws of Ancona.” “History of Armour for Battle-ships” (concluded). Letters to the Director:—“Seeking the Enemy at Sea.” “Notes on the Reflections on Naval Actions between Ships.” “The Progress of the British Navy.” “Naval Notes.” “Notices of Books.” Plates, etc.

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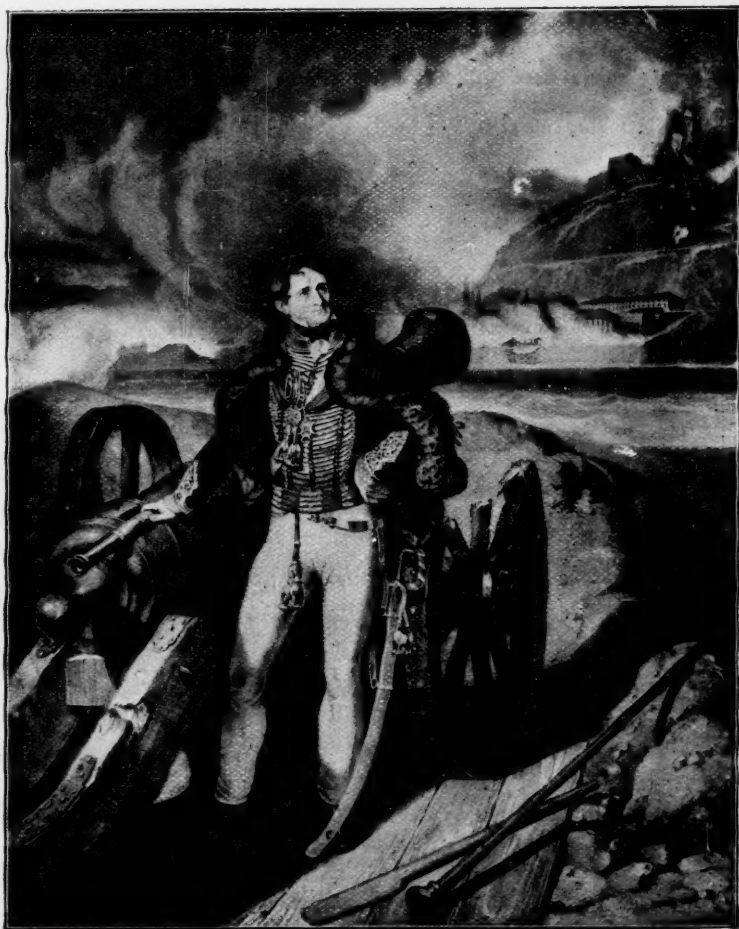
NOTICES OF BOOKS.

The Naval Annual, 1897. By T. A. BRASSEY. Portsmouth and London: Griffin and Co. Price 12s. 6d.

Want of space has prevented us noticing earlier the latest edition of this valuable work of reference. The editor complains of the difficulty experienced in preparing the *Annual* during Lord Brassey's absence, but he is certainly to be congratulated on having successfully overcome such difficulty, as the present work is fully equal to any of its predecessors. The *Annual* is, as usual, divided into four parts. In Part I. we have contributions from Sir G. Clarke, Corvette-Captain Ferber of the Imperial German Navy, Captain Orde Browne, Messrs. G. Dunell, J. Leyland, J. Thursfield, E. Weyl, and the editor himself. Mr. Brassey contributes five chapters; in the first he gives a valuable *précis* of the progress of our fleet during the past year, which is followed by one showing the relative strength of our own and the French and Russian fleets; in another chapter he gives some interesting details of the Naval and Military Forces of Australia; an Essay on the Principles of Imperial Defence, originally an address delivered at Melbourne before the Imperial Federation League of Victoria, forms a fourth chapter, which will repay the reading; while in the fifth the author again returns to the Manning Question, in which he proposes the formation of an Imperial Naval Reserve. He considers, as the result of the inquiries he has made, that a supply of 5,000 men could be obtained in the near future, which in course of time could be raised to 10,000 or 15,000 men. Sir G. Clarke contributes an interesting chapter on the "Limitation of Passive Defence," and M. Weyl gives his usual account of the Progress of Foreign Navies. The chapter on the German Navy by Corvette-Captain Ferber is also valuable and contains useful information, while the same may be said of the papers contributed by Mr. Thursfield on the Manœuvres of 1896, by Captain Orde Browne on the Attack of Ships by Artillery Fire, and by Mr. Dunell on Marine Engineering. In Part II. are the useful tables of our own and foreign navies, which have been carefully brought up to date by Commander Robinson and Mr. J. Leyland.

Part III. on Armour and Ordnance by Captain Orde Browne is as usual full of valuable and interesting matter, while Part IV. is devoted to Official Statements and Naval Estimates. The illustrations of ships are most excellent and artistic, and the *Annual* reflects credit on all concerned in the work of bringing it out.

PI



J. J. K. & Co., London.

COLONEL SIR AUGUSTUS S. FRAZER, K.C.B., F.R.S.,
Royal Horse Artillery.

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